

TRACKS OF POLYNESIAN MIGRATION

DOTTED LINE—PROBABLE MOVEMENT OF EXPULSION THROUGH INDONESIA
 CONTINUOUS LINE—PROTO-SAMOAN SWARM
 DOT AND DASH—TONGAFITI SWARM

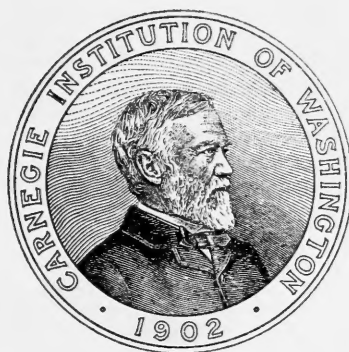
The Polynesian Wanderings

Tracks of the Migration Deduced from an Examination
of the Proto-Samoan Content of Efaté and
other Languages of Melanesia

BY

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PREFACE.

To introduce the work contained in the succeeding pages would be irksome; it partakes of the nature of a task, for the book must be its own best record of the results of years spent in study in the distant South Seas, of yet other years of intimate toil. But there is pleasure in making a brief and prefatory record of my introduction to these Polynesian researches.

That I owe to James Dwight Dana, not the least distinguished of the scientific staff of the United States Exploring Expedition which, under the naval command of Lieutenant Wilkes, made that brilliant cruise of discovery in the Pacific Oceans between the years 1838 and 1842. It was a work of supererogation on the part of my preceptor to answer my questions about the discovery of savage men in the distant sea half around the globe; it formed no part of the studies which I was pursuing under his direction. Yet he was ever cordial; my questions never went unanswered. Thus gradually I acquired a distinctly personal knowledge of the great work which had been done in Polynesia, an intimate acquaintance with men and scenes which serves still to supplement the formal record contained in the reports of that historic voyage.

Not long thereafter, yet it was all of forty years since Dana's day in the bright South Sea, it was granted me to cruise over many of the inter-island courses which he had followed. That my cruises were easy was a debt which I owed to the cartographic work of that expedition; that they were almost always safe was no less due to the moral effect which the American voyagers had impressed upon the savages at their first discovery.

When once I landed on the island of Malolo, remotely set in the Fiji Islands, and found the people coming to the beach to greet me with yams and bamboo tubes of water, it seemed an interesting, somewhat picturesque, ceremony. When I inquired into the reason I learned that it was called an ancient custom to proffer food and water to all visiting strangers. Yet I found that in less than half of a stagnant century a custom had become ancient. It was at Malolo that a boat's crew of the Wilkes expedition had been cut off, as duly set forth in the third volume of the narrative; after exacting punishment for this act of murder the Americans laid the

injunction on Malolo to welcome the stranger, and thus the custom arose.

After an interval of a dozen years I was called to take a part in the administration of the affairs of the kingdom of Samoa in that historic tangle in which the United States was striving to hold a disinterested balance. The most vivacious, and to me the most valuable, of the small group of island sages whom I gathered about me in the windward outskirts of Apia to help in the prosecution of my researches into the past of their people, was a very old chief of Vaiala. It seemed that he must have lived forever, this ancient Lautā who had long since retired from the active duties which fall to the village chief. Like all Samoans he had no sense of the lapse of time and no knowledge of the date of his birth. But he was able to contribute one early landmark: when he was a mere stripling he had gone to Tutuila to undergo his tattooing; when that painful but socially necessary operation had been completed he returned to Apia on the deck of "the first man-of-war." So far as related to that brief voyage from Pagopago to 'Upolu he was a survivor of the Wilkes expedition which had passed through his seas more than half a century before I knew him.

In these and many other ways my participation in the study of the South Sea has always seemed to me an inheritance from the voyagers who sailed with Wilkes so many years ago.

Nor should I omit acknowledgment of the obligation under which I lie to Laupepa, the last of a long line of Malietoas who had ruled Samoa from a period which corresponds to the time in our own reckoning when Norman William crossed the Channel and fought down Saxon Harold on Senlac Field. We had made him king. Poor weary soul, we could not make him royal, for we made it impossible for him to reign. Now that he has gone beyond the sufferings of a king, now that the line of the Malietoas has been broken off, now that the puppet kingdom of Samoa is no more, I recall with pleasure that he did enjoy the respite from the cares of his troubled state in the many hours in which he delighted to communicate to me his stores of the wisdom of the past. Few there were who could speak Samoan with his grace of diction; few indeed had minds so replete with the myth and tradition in which is preserved the ancient history of his race. In regardful memory I must not neglect to include among those who introduced me to these studies the name of Malietoa Laupepa, the last king of Samoa.

By rigid processes of exclusion I have sought to make the linguistic material assembled in this volume tell the tale of the peopling of so much of the Pacific as is comprehended within the range of its extent. It will be seen that Micronesia is wholly omitted; considerable material is available for the study of that equatorial region, but it is removed by an irreducible gap from the sweep of the data upon which these studies are based. In Melanesia this material tells no tale of the origin of the dusky races there found; it gives us no more than the assurance that the dark races were already settled in their crude savagery when the migration swarms of the brilliant Polynesians swept onward to happier homes ever eastward. Not all of Polynesia are we to find included within the scope of this work. The linguistic record here dealt with excludes of its own motion the later sweep of migration, that to which I have given the designation of Tongafiti, the adventurous voyagers who swept onward past central Polynesia to found new races at the utmost verge of the great South Sea.

Our material restricts us to the most ancient Polynesians, the first-comers into the Pacific, voyagers who swept the unknown sea some two thousand years ago. Of these Proto-Samoans we find here a history which carries them back to their expulsion from the Asiatic archipelago. I have essayed to plot their ocean fairways. I have shown that in two swarms they came out from Indonesia; that one swarm came around the north of New Guinea and entered the Pacific by way of Saint George's Channel and at last came to new homes in Samoa; that the other was driven by advancing Malaysians into the Arafura Sea and south of New Guinea through Torres Straits and thence onward to a new home in Fiji. There in Nuclear Polynesia the sundered kin resumed their fellowship; thence they despatched yet other expeditions which brought them to Hawaii, to New Zealand, and to several spots in the distant east of the Pacific. Upon the smaller of the accompanying charts I have plotted so much of these Proto-Samoan voyages as I have been able to determine, and to these I have added the voyages of the Tongafiti folk who came later, by about a thousand years, leaving uncertain the voyage which brought them into Nuclear Polynesia, since this material affords no record thereof.

Nor is this all. This record points to something of wider value than the wandering of an unimportant folk in a world of islands which can attain but scantily to economic importance. We are

engaged upon a group of languages of the most elemental character, a speech wherein the parts of speech have but just begun to make their appearance. That in itself would be matter of no great moment, for we know many languages of the isolating type. That which is of particular value herein is that we find ourselves engaged with a language family in which we can discover the beginnings of human speech. We find ourselves made witnesses of the man who can emit a cry because he has the animal equipment of a throat and lungs, and we see that man, with a sentient mind to give him the impulse of progress, striving by rude and uncouth mouthings to attain to facility in the use of the consonants which make speech. It will be an acceptable reward of pleasant toil if it shall be found that the Polynesian language family is capable of affording us a true knowledge of a genesis of the speech of man.

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CHAPTER I.

THE PROBLEM OF MELANESIA.

Inosculation of the Melanesian and the Polynesian languages and the determination of values therein—The position of Melanesia—Viti an area of the mingling of the two stocks—Polynesia has charmed and Melanesia revolted their discoverers; our acquaintance with the latter therefore falls short of our knowledge of the former—Islands of the Polynesian verge—Polynesian inclusions—Languages which borrow.

Based upon the possession of a greater mass of material than we have ever enjoyed for the examination of any one of the languages of the islands of the Western Pacific, the purpose of this work is to present such determinations of ascertainable values in the inosculation of the Melanesian and the Polynesian tongues as the present state of our knowledge may be found to warrant. We shall find it convenient, in due course, to list a brief bibliography of such works as have become available in the study of this topic. These interesting and valued works of my predecessors in this tangled field will be found to lie in two classes, the record of data and the discussion based upon such data.

The publication of Dr. Macdonald's studies in the speech of Efaté, eagerly welcomed and as warmly reprobated, has seemed to make it incumbent upon me to engage more intimately upon the prosecution of the studies whose results are offered in the present volume. His work upon Efaté falls into each class. It is a considerable vocabulary of a speech largely Melanesian; it is a labored essay to build a structure of criticism and comment upon this material. We shall welcome it in its former capacity as a long stride onward in our knowledge of Melanesia; we shall find it quite as necessary to subject its argumentative deductions to rigid scrutiny, in which our interest is to remain cordial even though our judgment prove adverse.

The least known of the trine division of the Pacific, Melanesia affords the most numerous and the greatest problems which confront those of us who have given time and have expended thought upon the study of the life of man in the South Sea. These problems are of two sorts. One great class consists of the problems internal to Melanesia itself, the other has to do with the problems of the Polynesian ethnic and linguistic stock. Being problems of human life, they are by no means discrete. The closer into them our examination carries us the more intimately do we learn the interdependence of the problems of the one sort upon the problems of the other.

Considered geographically, Melanesia is a unit easy of definition, save at its northern projection where it impinges upon areas in one direction known to be Papuan and in another upon yet other areas known to be Indonesian. The islands (to which the skin pigmentation of the inhabitants, in marked contrast with that of their neighbors eastward, has made it a simple metaphor to apply the designation of the Black Islands) lie in a loose linking of chains a thousand miles offshore from the northeastern coast of Australia, and in their extent in a roughly northwest direction they closely parallel that coast. The southern verge of this area falls little short of the Tropic of Capricorn; its northern limit lies almost exactly on the Equator. These limits are, respectively, the considerable land mass of New Caledonia and the tiny islets of the Admiralty Group. Reckoning northward from New Caledonia, we include in the larger subdivision of the area the Loyalty Group, the New Hebrides, the Banks Group, the Solomon Islands, and the Bismarck Archipelago. The designation of this last component we owe to a colonizing zeal which has proved sufficiently potent to act upon the Germans, geographers as well as statesmen, in blunting a sense of common geographical propriety. The islands had borne the names of New Britain, New Ireland, the Duke of York, and New Hanover, collectively the New Britannia Archipelago, so long and so familiarly that it was force rather than any necessity which new-named them Neu-Pommern, Neu-Mecklenburg, Neu-Lauenburg, and dedicated them in totality to the then Iron Chancellor. A geographical sin, unfortunately a sin accomplished.

The Fijian Archipelago may or may not be included in Melanesia; all depends upon the interpretation of certain well-defined problems of its own. Geographically it is not necessary so to include it, for it lies remote, out of the northwest chain, set by itself in its own sea midway between the scarcely contaminated Melanesia of New Caledonia and the equally uncorrupted Polynesia of Samoa and Tonga, the region to which I have assigned the convenient designation of Nuclear Polynesia. Ethnically and philologically Viti must be acknowledged to lie in a position of mixture of the two neighbor stocks. I know that I go beyond many, if not all, of my fellow workers in weighing the Polynesian element in Viti.

While with this exception we find Melanesia a well-defined unit upon the charts we are by no means qualified to decide if this unity extends to the ethnography and philology of the region, and that because of our lack of consistent information. We are sadly deficient in the necessary data, for Melanesia has received scant attention.

While Polynesia has attracted, Melanesia has repelled its discoverers. About the islands of the central tract of ocean romance has cast its charm; its power remains even in these later days.

Sensitive natures have counted the world well lost for the enjoyment of its delights; ignorant men have yielded to the same compulsion and have found dingy pleasure in settling down as beachcombers. The great nations have sent brave fleets to the exploration of these islands, have lent their most competent administrators to foster the states of island monarchs. The people have won those who came to seek them; they have been treated as gentlefolk.

But Melanesia is a volume whose chapters are horror upon horror. The islands of this western area lack the charm which holds the eye upon the atoll with its palm tiara or upon the towering summits forest-clad and necklaced with cascades so familiar in the Polynesian scene. The people of Melanesia have an aspect more savage than the statuesque dignity of the Polynesian. It does no violence to the sense of the fitness of things to look upon them as a servile crew. It was only upon the score of our morals, not of social propriety, that objection was raised to the labor trade in Melanesia, a form of slavery to which the Polynesian never was subjected. Explorers in Melanesia have relatively been few. Missionary endeavor was slow to attack this field of crying need, and when the missions did effect a lodgment in this dark region of the sea the pioneers were members of a sect which affected repugnance toward all matters which make solely for broader culture. From many the crown of martyrdom was not withheld. Yet that blessing was, after all, individual; we compare the information derived from the Melanesian missionaries with the treasures of scholarship which mark the work of their fellows in Polynesia, and we deplore the comparison.

Of such sort are the reasons wherewith we must account to ourselves for the fact that Melanesia yet remains to the student almost wholly in darkness and gross darkness upon the people, and that the light which here and there in a random ray has been shed upon its problems must first be subjected to close analysis.

In the early lines of this chapter use has been made of the term inosculation of the Melanesian and Polynesian tongues. It is now in order to define the nature of the approximation of these two language series within the Melanesian area.

We have first the several islands wholly or principally inhabited by folk of Polynesian race and speech, yet lying within the region which geographically is classed as Melanesia. Such, among others in a short list, are Aniwa and Fotuna,* Sikayana, Ticopia, Liueniua,†

*This spelling having been in some general use, I find it a convenient means of differentiation from the Futuna of Nuclear Polynesia.

†"The name of this atoll as given on the chart is Leueaeuwa, but the name, I think, is wrongly spelled, as it bears no meaning that I know of in any Polynesian language. The proper spelling is Le ua Niua. This was certainly the way in which I wrote it before I knew of the other spelling, and the Samoan who was with me also spelled it in the same way." The Rev. G. Brown, D. D., "Reports of the Australasian Association for the Advancement of Science," IX, 258.

Tauu, Nukumanu, Nuguria, Rennel,* and Moiki. Since these islands represent the western limit of Polynesian race and Polynesian speech, we may name them the islands of Polynesia's western verge, or simply and briefly the Polynesian verge.

In the next class we find small communities on islands with an otherwise Melanesian population, where Polynesian speech is spoken by folk presenting sometimes more and sometimes less of Polynesian race traits. Under this designation come, among others, Mae in the New Hebrides (on the island known as Three Hills) and Filihi in the Swallow Group. To this class of traces of Polynesian origin we shall apply the term the Polynesian inclusions.

Necessarily the foregoing classes are limited in the number of the instances properly to be assembled under one or the other. The third class is more widely extended than we are yet in a position to estimate. This class is to include all the instances in which we find peoples of Melanesian stock and speaking languages preponderantly non-Polynesian, who yet derive some portion of their vocabulary from Polynesian loan material. For convenience we use this term, recognizing that the subject is open to argument. In a diagrammatic scheme of the possibilities it is as antecedently possible also that the Polynesian has borrowed from the Melanesian, or that the common element derives in Melanesian and Polynesian from an earlier undistributed source. Yet I have no hesitation in anticipating the result of the argument and describing this common matter as Polynesian loan material. It is this latter topic which is principally to engage our attention in this work.

At this point it seems proper to invite attention to the appendix introducing a bibliography of the published matter which has been consulted and which has yielded more or less of assistance in the study of this topic. This will be found on pages 493-506.

*A word of explanation may not be out of place as to the unequal dealing with the names of the twin islands Rennel and Bellona. These are chart names and secondary in rank to the names in use by the islanders. For Bellona we have the valuable record of Dr. Sidney H. Ray, who has recorded its vocabulary under the name *Moi-ki*; the hyphen is wrongly placed through a typographical error, as has been pointed out by W. von Bülow; I prefer to standardize the name with other Polynesian forms and therefore omit the hyphen. The name of Rennel is cited by Wawn and by Thilenius as *Muava* or *Mungava*; probably it should be *Moava*, but as my notes are not positive I hesitate to adopt the form. Thilenius makes the distinct statement that *Moiki* has no fixed population and is no more than a fishing station for the people of Rennel. This is not in accord with my observation nor with that of Captain Wawn, who has written an interesting narrative of the long search for his home in which he assisted a labor boy who had been carried away to Queensland. The home was found at last in *Moiki*, which Wawn calls *Mungiki*.

CHAPTER II.

THE DICTIONARY OF EFATÉ.

Most of the accessible vocabularies are very scanty—Only three Melanesian dictionaries (those of Mota, Efaté and Viti) are at all considerable—The development of Macdonald's theory of Semitic origin—His Efaté dictionary and its false lexicography—Some words hidden from sight—Clumsiness in the definition—Introduction of polemic dishonesty—His false etymology—No clear distinction of several dialects.

Quantitatively regarded, the lists presented in the bibliography seem to show that we have no inconsiderable material bearing more or less directly upon the philological problems of the islands of the Western Pacific chain. When investigated more closely, when measured in a qualitative analysis, the tale is far other. Many of these vocabularies, so diligently sought and so sedulously treasured, are mere lists of but a score or so of words and often of problematical accuracy in reporting. In very few cases have they been subjected to intelligent criticism. Yet they are by no means to be despised. They are the best we have, and with them we must perforce be content until future exploration affords better data.

We have in the Melanesian tract but three vocabularies of any considerable magnitude. The dictionary of the Fijian is of inestimable value, a storehouse of information; yet it has been found to yield its most valuable results when associated with more strictly Polynesian investigations. The Mota dictionary is of far lower order, yet none the less is it a valuable implement of Melanesian study. The Efaté dictionary is by far our best contribution of data upon which is to rest the science of Melanesian speech; and this hearty commendation must be kept in mind through all the adverse criticism which it will be necessary to pass upon it in many details.

Dr. Macdonald awakens our envy when we note the opportunity he has enjoyed for the study of the speech and the habit of Efaté, thirty-five years spent in the search into the language and the mind of this interesting family of Melanesians, a study directed solely to the attainment of such knowledge as should better fit him to become the guide of the souls to whose cure he had been sent in the isles of the sea at the uttermost parts of the earth.

In the bibliography it will be observed that in 1882 he exhibited his Semitic theory to the Royal Society of Victoria. In 1889 he presented it anew and in richer development in "Oceania." At intervals he has contributed minutely prepared papers to the Journal of the Polynesian Society exhibiting yet further argument in behalf of his theory. Now he has attained to such a mass of evidence,

so satisfactory to himself, that he feels justified in entitling his latest work "The Oceanic Languages—Origin," rather than the dictionary of Efaté, which it really is. His Semitic theory we shall have to study in a later chapter of this work; at this point we feel it proper to comment upon the work as dictionary alone and freed from its speculative adornments.

An initial and serious objection to the work is that it is devoid of even the slightest summary or sketch of the grammar of the language. True there is an introductory section of well nigh a hundred pages to which a hint in the title points as grammar. Yet in the whole treatise there is not so much as a single page by reading which the student may arrive at any comprehension of the manner in which to combine into sentences the words so plentifully listed in the vocabulary; there is no hint by which he may be directed in the use of these many words as actual speech expressive of the thoughts he would convey. Despite its presence where a grammar is properly to be expected, this assemblage of introductory chapters is the argument of a fine-spun theory, interesting to philologists, yet wholly useless lumber to the person who must rely upon this work as his introduction to the speech of Efaté.

So little has Dr. Macdonald understood the proper purpose of a dictionary-maker that he will not even head his vocabulary for what it really is, but prefers the polemical statement of his dear theory in the title "The Oceanic Languages, their Material or Vocabulary Set Forth in a Complete Dictionary Comparative and Etymological of One of Them, the Language of Efaté." It is only as an afterthought, deferred to the last possible moment, that the man who has spent more than a generation in the study consents to affix its title to the really valuable part of his work.

Such a mental attitude on the part of a lexicographer, the grandeur of his privilege to record that which is being so completely obscured in his zeal to register what he fondly imagines ought to be, is difficult of comprehension to those of us who content ourselves through busy years of dictionary-making. Yet this attitude is not new with Dr. Macdonald; it is well known that Webster refused to sully the first edition of his great dictionary of the English language by including the word "bridegroom," which merely existed in English speech and had no right to exist, yet in the end he failed to secure currency for "bridegroom." With this record of lexicographic pertinacity we are ready to make due allowances for the outcrop of the theory which to Dr. Macdonald means so much.

To what extent this dictionary answers the author's characterization of "complete" we have no means of ascertaining. I prefer to record the fact that it contains 3,657 word entries, a fact established by my own tally. This gives us a positive measure and

establishes at once the great superiority of the Efaté dictionary over all Melanesian word collections. It is of inestimable value to us by reason of its comprehensiveness as speech record.

When we examine carefully and in detail this work in the aspect of that which must represent its permanent value, that which will remain after the demolition of the theories of which it is made the vehicle, namely, its value as a dictionary of the Efaté speech, our criticism will fall broadly into two classes, the mechanical and the sense characteristics.

The former class is but a particularization of the postulate that lexicography has grown into a science with no little exactitude in its method. Without close study of the principles of the science, it is wholly impossible for any student of language, no matter how intimate may be his knowledge of the speech upon which his study has been directed, to win success as a lexicographer solely by reason of his familiarity with his language theme. Sage as Dr. Macdonald is in all that pertains to the speech of Efaté, he makes all the typical errors of the unskilled dictionary-maker.

In a dictionary the alphabetical order of entries is necessarily supreme. Almost any page at random in this work will exhibit instances where the entries capsize the alphabetical order. Our author will undoubtedly explain his inversions on the score that thus he is able to keep together stems and derivative forms which on the alphabetical system would be scattered. It is hardly worth while remarking that the user of a dictionary has the right to demand that the word of which he is in search shall be found in its proper place. I may note that in the most assiduous use of this dictionary, extending over many months of close examination, I have not succeeded in conquering my annoyance at the difficulty of finding many a word which is not in the place where it should be; in fact that I have been able to make use of it only after the compilation of an index—an index to a dictionary!

If this is the case in the mere arrangement of the words on the page, where a misplacement entails no greater hardship than a search through one or more of the neighboring pages, what shall we say of those forms which are secreted—it may be pages away and under a different initial—in some entry from which they may be extracted only through a knowledge of the language far beyond those who are likely to use this work? For the exhibition of this blemish we may cite the noun *futei*, the white ant, the entry containing note of the variant forms *mitoi* and *mitei*; yet neither of these forms, though equally in use, occupies its alphabetic position by so much as the merest tag of a cross-reference; to a student of Efaté encountering the word *mitei* and seeking its meaning this dictionary would offer no help.

In the latter class of criticism we note that many of the definitions are so clumsy as to suggest that the author had very slight knowledge of what the English name is of objects which he is describing. This is notably illustrated in the definition

sumilli, a thing like india rubber in a clam shell which, when touched, causes the shell to close.

This fairly parallels the entry in Shirley Baker's Tonga dictionary of "*balolo*, a reptile much like the earthworm found in the sea."

In further showing of Dr. Macdonald's ineptitude in definition we note the following, somewhat at random:

alo-fi, wave (with a circular and rolling motion) to him, to beckon to.

ātū saki, plop up (of a turtle, also of the sound of the breath in the throat of a man recovering from a faint or dying).

beingo, a kind of flute (coconut shell).

bisa, to utter inarticulate sounds (as those made by a coconut on the gravel which a rat is turning about trying to get at its kernel).

nakasu nabwo na, the cartilaginous substance on the front of the throat, lit. the stick, or tree, of the *bwo* (pectus).

kita roā sa, to hate turning after him (someone), as a boy sent a message meeting another boy and (hating to do the message) turns after him to play.

libu, lebu, the middle of the lower part of the body at the upper part of the back of the pelvis.

These are sins of ignorance, and ignorance, though stupid, is at least innocent. In general, in my work upon these dictionaries coming first hand from missionaries who lay no claim to skill in the arts of lexicography, I have welcomed the naïveté and have employed the definition wherever its terms have not been too ridiculous. They are original documents; their simplicity is their warrant of honesty. In some former paper, I believe, I have mentioned the care with which I have refrained from recasting these definitions and the reasons therefor. Such sins as have been here presented we are glad to forgive. Our glee at their discovery carries no malice.

But when the definition begins to squint at something ulterior, when a word is added with the sly insinuation of a purpose to link the fact and the theory more tightly, when definition becomes polemic, such exhibitions I do not hesitate to stamp as scientific dishonesty; they prove an absence of conscience, without which speculation is mere trickery held in check only by consideration of the risk of discovery.

A very few instances here (the volume abounds with such and they will receive detailed attention in the critical notes) will suffice to show at this point that my characterization is not lacking in support.

tere, the mast (of a canoe or ship), calf (column) of the leg; Arabic, *ṣariyat*, *ṣari*, the mast of a ship, a column.

If Dr. Macdonald's compelling Semitic theory had not already produced a moral strabismus of the insight, is it to be imagined that he

would have cast into a parenthesis that word "column" in explication or suggestion of an explication of the sense of calf? That offensive and offending parenthesis was not set into the definition innocently.

alo, to swim (wave hands).

The parenthesis is expressly for the purpose of linking it with the verb *alo-fi*, which I have already cited for its clumsiness of definition.

bare, to be dirty-looking, like a sightless eye (of half-raw food); Hebrew *'avar*, Ethiopic *'awir*, to be blind.

bwēs, bēsū, a young pig whose mother is dead and which is brought up as a pet and is therefore tame and gentle; also a motherless child, so called from being deprived of the mother's milk and, as it were, arid; Arabic *yabisa*, to be dry.

The same leering argument will appear in the study of *ngoko* (95), where he introduces *hack* in definition of Hebrew *ḥakāh*. If his use of italics has any meaning at all it must be intended to mark his *obiter dictum* that the name of the Teutonic ax is Semitic. And this in a work of polemical philology!

Such childish efforts to misdirect the comprehension arouse repugnance; they cast upon the whole work a suspicion which really it does not deserve. The result of such discoveries of obliquity is that one loses confidence in each uncorroborated point in the book. To many students it will render the work valueless. Yet so far as my acquaintance with the speech of Efaté extends, reinforced by a considerable familiarity with other tongues of Melanesia and of Polynesia, I have no hesitation in repeating my former statement that this is far and away the most valuable contribution to our knowledge of the speech of the Western Pacific.

It is not only when Dr. Macdonald espies the chance to lug in his Semitic theory that he takes unwarranted liberties. He etymologizes generalities on materials which do not reach beyond the two entrances to Havannah Harbor.

binauta, to be numb, devoid of feeling, as one's limb from stoppage of circulation of the blood in it: *bi*, to be, *nāta*, a person (as if the limb belonged to some other person).

bātua na, the knee, prob. *bau*, the head, and *tua*, leg.

kuruku, the ankle is so called because the leg gathers itself, as it were, into the knob of the joint.

To these three add *tere*, as presented a little earlier. It is quite fortuitous that no less than four glaring errors have to do with the leg; one can but wonder how it has come about that Dr. Macdonald's legs have proved such unruly members.

Yet another grave fault vitiates this dictionary as speech record. The author supplies a copious store of variant forms for many words, each ticketed with the simple notation of "d.," meaning dialectic. Nowhere is any hint afforded us of the habitat of such dialects.

Efaté is not a large island, yet in every smallest Melanesian island we are sure to find dialects from village to village, often amounting to such extensive variation as to produce incomprehensibility. It would have added clarity to this record if Dr. Macdonald had identified these dialects by their place names, if by nothing else.

As it is, we are left without the knowledge of what is the speech which he assumes as the standard from which these dialects diverge. It is inferential, and only inferential, that he has assumed for such standard the speech in the community nearest his mission station; that is to say, one of several petty villages on Havannah Harbor. Since the seat of the administration of the New Hebrides is at Vila, in a different bay, it is possible that the speech there in use may tend to become standard for official communication; yet not a single entry in connection with these comprehensively noted dialectic variants indicates which are Vila forms.

More than this. In the examination of Efaté material presented *in extenso* in a succeeding chapter we have felt a grievous loss in the inability to coordinate the several dialects in order that we might study the several systems of vowel and consonant mutation, a matter of vital importance. The most we can say from the study of this dictionary is that at one spot on Efaté, presumably proximate to the mission station, the people use this word, other peoples at one or more undefined places on Efaté use this or that other and frequently quite dissimilar word. To what a disadvantage this necessarily puts the student appears in quantities that may be measured in two brief Efaté vocabularies,* upon which we had to rely before Dr. Macdonald's dictionary was published. From Hans Conon von der Gabelentz† we learn that one of these vocabularies comes from Mele, the other from Erakor on the south coast of the island. The two lists contain resembling words to the number of 26, all lying within their common Polynesian content. The Mele list, numbering 118 words, shows no less than 87 words immediately recognizable as Polynesian; the Erakor list, numbering 121 words, shows but 27 of Polynesian source. Mele is the language spoken between Havannah Harbor and Vila; Erakor, on the south coast, has the mountain center of the island between it and the mission station which we have inferred to be the seat of Dr. Macdonald's standard speech. Yet the Erakor dialect, and not the nearer Mele, most accords with this dictionary. With this suggestion of the magnitude of the dialectic differences we shall feel great uncertainty as to the results of the more intimate inspection of this dictionary record upon which we are to enter. Dr. Macdonald is the one man who knows these dialects apart; it was his duty to

*Turner, "Samoa a hundred years ago and long before," page 354.

†Die melanesischen Sprachen II, 1.

differentiate them for the benefit of others who must rely upon his accuracy.*

No one can regret more than I the necessity under which I lie to pass such comments as those which have preceded. Yet let it be well understood that they are by no means conclusions superficially drawn. The difficulties mentioned have been encountered by me in no mere casual glance at the work, but have arisen to hamper me in my close study to learn this language from the material here afforded. How close this study has been will be shown in the following discussions, in which it will appear that the words have been analyzed down to the very letters of which they are composed.

Despite these great drawbacks, despite a still greater fault yet to be discussed, I would not recede from the characterization which I have presented and which I have reiterated. Imperfect as it proves itself to be, Dr. Macdonald's dictionary is amply the most valuable contribution to our knowledge of any speech of Melanesia.

*Even as these pages are passing to print I am in opportune receipt of a letter from Captain Rason, until quite recently British commissioner in the New Hebrides. This letter affords us valuable information upon this very point and not ungracefully manifests the writer's true kindness of heart.

"I wish to explain as soon as possible, if possible in time for your book, the inner meaning of Dr. Macdonald's muddle. When the missionaries established themselves on Efate he was in Havannah Harbor, and natives who first became Christians left their villages and came to the mission station for protection. Thus the language of the mission station became a medley of all the dialects around. This gradually coalesced into a special dialect which became a lingua franca with the natives and was partially understood by all. As the heathen natives died out or became Christian the mission language was claimed as the language of the island. Then the Bible was translated into this language and Dr. Macdonald wrote a dictionary of it as if the missionary language was the original language of the various villages before they were Christian. The poor man only deceived himself and is now deceiving others, but it is not wilful scientific dishonesty. I should like him cleared of that. It is a case of self-deception."

CHAPTER III.

SAWAIORI MIGRATIONS.

Paucity of our knowledge of the Melanesian origins—They may be autochthons—There are two principal theories of Polynesian migrations—The sieve theory and the argument of Thilenius in its behalf—A spurious tale of seven times seven retailed by Deeken—The general migration theory—Tregear's statement that this is the commonly accepted hypothesis—Percy Smith in its support—A fallacy into which Thilenius has been led—Persisting memories of an inferior race once encountered—The log of one of the great voyages.

Thus far we have considered the work in respect of its status as an Efaté dictionary, a status which it has comported with Dr. Macdonald's lucubrations in the realm of theory to adumbrate in the text even as he has buried it as an afterthought in the title.

Before advancing upon his main theme, the theory and effort at substantiation of a Semitic origin for the languages of the Pacific, we shall find it well to devote some consideration to the present state of our opinion as to the movement in migration which has brought to the Pacific area the peoples now spread to its remotest isles.

So far as relates to migrations of the Melanesian peoples, we are wholly without information. This work of Dr. Macdonald is practically the first essay toward giving any of the Melanesians a race history anterior to their residence upon the islands which they now inhabit. Until this or some other theory is properly established, we can do no more than to regard them as *ex hypothesi* autochthons. If future students of their life and thought succeed in bringing to light traditions which may point to a movement over seas from an older to their present homes, then we shall have a basis on which to found new speculations. Until such a time arrive we shall find it better to stand on the commonly accepted hypothesis.

But in the case of the brown Polynesian race the circumstances are far other. We have ample traditions of migration, we have the names of the halting-places; we find a whole race, widely sundered upon the sea, looking back to the west with a single gaze to an ancestral home. We have here and there the belief in westward Puluotu as the abode of the dead; no mean proof, since the dead go home. Above all we have the primordial Hawaiki across the great sea of Kiwa, the illuminating Saba myth, than which no tradition of men has ever had a wider extent.

In so far as this element of knowledge impinges upon Melanesian areas we have theories which have been elaborated to account for the recognized inosculation of brown Polynesian and black Melanesian. Omitting mention, as here unnecessary, of movements of convection within the general migrating mass, we find two main theories ably propounded and stoutly argued. Each will receive our attention to the extent in which it bears upon the phenomena of this inosculation.

We are first to examine the theory which may be not inaptly designated the sieve theory. In its briefest presentation it is that the islands of Melanesia and the Polynesian verge have served as the meshes of a net to catch the drift of castaways from islands of central Polynesia blown away from home and set to the westward by the concurrence of the prevailing winds and currents of that oceanic area. Its most recent and not the least ingenious presentation is found in the extensive studies of Dr. G. Thilenius,* professor of anthropology and ethnology at Breslau.

His theory is brilliantly conclusive—upon the hydrographic charts. Taking the eastern islands of Malaysia as a datum-point, he draws the line of least resistance to migrant fleets, the line where the current sets them on their way and where the wind blows fair. On the chart he dots their track far to the north of New Guinea and the Bismarck Archipelago. He gives them successive landfalls in the southern Carolines and along the chains of the Marshalls. Thence onward to the Gilberts the constants of the weather are still in their favor. They make fair weather of it still further to the Tokelaus, and at last they come to port in Samoa. Once established in central Polynesia, the winds and currents which have served them so well become malefic. They blow boats away from peaceful shores and out for starving, thirsty voyages upon unfriendly seas. If the Melanesian sieve catches any of these involuntary wanderers their fate is that of the castaway upon inhospitable shores of savagery. In the work cited it is very argutely presented, yet it can scarcely be called convincing.

No one who has had occasion to recognize that the work of the real Polynesian research is being to-day, as always, painfully prosecuted by enthusiastic workers in remote islands of the sea, where one book is a treasure indeed and library privileges seem no more substantial than the seraphic and impossible vision, will regret the space here given to a presentation of the arguments of Dr. Thilenius. Thus only will they reach earnest students in savage scenes who could never have access to the rare and costly work in which these arguments are presented. We acknowledge the pleasure in helping these distant students, for they are the real workers.

**Ethnographische Ergebnisse aus Melanesien: Die polynesischen Inseln an der Ostgrenze Melanesiens.*

After recording known instances of involuntary voyages from central Polynesia to the safe landfall of the Polynesian verge, after discussing the Polynesian verge as a sieve for such migrations, Dr. Thilenius concludes his argument as follows:*

When one considers the remarkable exiguity of our islands [the Polynesian verge], of whose surface, furthermore, only a fraction is habitable or productive of food, certainly we find an adequate explanation of their present population through these involuntary migrations. Whether at any former time a Melanesian population of any sort lived upon these islands is a question easy to put but hard to decide. No data of any nature bear upon this idea. It is possible to hold the idea that there had been a Melanesian population, but that for reasons unknown it had withdrawn before the coming of the first wanderers, for the earliest settlers on Nuguria and Liueniua found the land uninhabited and there is no ground on which to set aside their testimony as false.

Therefore the migration theory needs a brief discussion. Our islands might have been halting-places of the peoples swarming from somewhere in the northern Moluccas toward Polynesia. These early Polynesians must have come hither out of the northwest, fairly enough along the same course as was traversed by the boats coming from Ninigo, Taui (?) and Kapingamarangi. That presupposes that our little atolls, at least 800 or 1,000 years ago, constituted a region offering an adequate supply of vegetation. Whether this was the case may readily be questioned on the score of the thinness of the soil-layer on the islands to-day. It is always a possibility.

The wanderers found the islands uninhabited and left behind them, on each or on some, a company of those who were travel-weary. But these folk, wholly ignorant of geography, in some wonderful fashion hit upon the course to the other islands of northwest Polynesia. The knowledge of these may have come to them from the fabulous aboriginal Melanesian population, who surely, to have been able to give such information, contrary to the character of the present north Melanesians, must have conducted extended voyages and thus have known one or other of the large islands of Melanesia. The wanderers would surely have made sufficient inquiry. Yet they prefer to follow a chain of poor atolls instead of seizing and holding the great and fertile islands that lay close at hand. They had sufficient numbers, for we can think of them only as the complement of a fleet. But Buka, which lies so close to Nuguria at which they first touched, shows no trace of Polynesians.† Then the whole aboriginal Melanesian population of our atoll is become a picture painted by the fancy.

None the less it is highly probable that the wanderers came to one of the great islands, for they sailed hither against the trades, and it is more likely that they fell to leeward than that they, ignorant of the situation of Samoa, busied themselves to make headway against them. At the least it is probable that wind and current set the wanderers westward. That not a single boat, on the ten-degree stretch from Nuguria to Sikayana, was driven westward by only so much as a degree and a half, which was sufficient to bring one of the great islands into sight, is so much the stranger since Kilinailau and Nisan lie west of Nuguria and approximately in the longitude of Buka. These were originally settled by Polynesians, and in

*Op. c., page 78.

†I can not let this statement go unchallenged. In this work I have collated thirty-one vocables from Buka, of which twenty-four are borrowed from the Polynesian, the quality being computed at 70 per cent.—W. C.

the sense of the migration theory simultaneously with Nuguria. This can be understood only on the theory that a part of the fleet, at least on this stretch, was set somewhere about two degrees westward.

Are we then to assume that a people endowed with the energy to enter upon a voyage into the unknown were not in condition to set foot on one of the great Melanesian islands? Did they find the whole island thickly set with towns which beat them back? Had the weeks since they had forsaken the homeland caused them to avoid a conflict which would have put them into possession of a fertile island in order that on the other hand they might follow with marvellous instinct a chain of islets which would lead them next to Ticopia, after which they must sail a long voyage on the open ocean? And all this against the trades! Furthermore we are confident that the wanderers carried with them useful animals and plants. Probably they landed some of these upon our islands. What has become of them? Tradition and history know them as introduced by settlers or altogether the gift of the white men. Have those originally introduced perished, have they run out?

The more we try to establish details of the voyage in regard of local conditions and the present character of the Polynesians, so much the more improbable becomes the thought that strikes us at first glance that our atolls were the halting-places of the early Polynesians.

Readily enough the possibility is suggested in accordance with which the wanderers journeyed in close accord with the theory, used the islands as stopping-places, etc. But among the multitude of possibilities that suggest themselves the exact coincidence would mark this as an astounding accident. For not only during the voyage along the Melanesian islands must an unusually great series of accidents have been actively at work, but in the same measure the same must have been true from the outset of the journey.

The early Polynesian left the Malayan tract, as is properly to be assumed, by way of the Celebes Sea and Straits of Molucca and then encountered current and wind conditions varying from season to season. From November to March northwest and north winds blow with interruptions and a current sets toward the southeast. In the latter case the Polynesians might actually reach our islands. But that implies the beginning of the voyage in the bad season. If one takes into consideration the remarkable sensitiveness of the Oceanic peoples to rain, almost laughable in our sight, he will scarcely admit the conclusion that the Polynesians intentionally set forth in the stormy season of the rains. To this is to be added the fact that the seasonal change of wind and current which holds in the Pacific was unknown to them, for they are assumed to be coming out of regions in which this change does not exist in anything like the same fashion.

Consequently there is much in support of the argument that the early Polynesians left the Malay Archipelago during the good season, that is to say while the southeast trades held in the eastern regions. They came then immediately into the equatorial countercurrent, which, moreover, flows in the northwest season, although with diminished strength; or they were forced into it by the south equatorial current. This area is also the region of calms and variables. They were thus especially directed toward the current upon which they were necessarily borne. The importance of these equatorial currents, which attain a considerable velocity, is known through the Spanish attempts to reach the Palaus and from the history of boats drifted off from the Carolines. From the Palaus the boats always drift to Samar or the southern Philippines (north equatorial current); on

the other hand there never came folk from the Philippines to the Palaus, but only from Celebes and the Celebes Sea (equatorial countercurrent). The journey against these streams is possible only with very favorable winds; they are so considerable that even in the present time the sailing vessels of the white men have to take them very largely into the reckoning. The schooner in which I went to Ninigo traveled the long stretch from New Hanover to Ninigo only with the south equatorial current, and most of the time against the stormy but certainly light northwest wind. On the return voyage the current was so strong against us that we had a great notion to work up to 4° N., where we could catch the countercurrent which would help us to an easting from which we could reach southward—that is, back to the Gazelle Peninsula.

The early Polynesians coming out of the Celebes Sea drifted in all probability along the southern edge of the Carolines toward the east. With this current, not exposed to strong contrary winds, they could reach the Gilbert Islands, where local currents make their appearance; among them such as would set them southeast, even through the Ellice group. Accordingly, on meteorological grounds, the Polynesians voyaged, not along the Melanesian islands, but by a straight course through Micronesia, and reached Samoa, whose Savai'i may have been the prototype of Hawaiiki. Perhaps the boats drifted still farther to Fanning Island, in order to reach Samoa. There are many possibilities in a region where the countercurrent has less force than between the Moluccas and the Gilberts. This is not the place to follow out the further distribution of the wanderers after they had once reached the present Polynesia. But that an importance attaches to the countercurrent for migration theories, particularly in its western part, is clear from the phenomena of the flora. Its distribution is such that the botanical boundary incloses central Polynesia, Viti in part, next the Ellice and Gilbert groups, finally the Carolines, as closer to India, while Melanesia forms a province of its own. The men and the plants of Polynesia, therefore, must be regarded as having migrated along the same track. Would it not be intelligible that to the Polynesian, who came from the rich Moluccas, the atolls would be less pleasurable and after a short sojourn they swept farther along until at last they reached again a better endowed, a mountainous, and a greater island, Samoa?

Considerations such as these, of which much is lacking to the theory, suggest themselves with divers variations. Here, before all things, should there be but a single probability, it would be of significance for the further fate of the early Polynesians who reached the equatorial counterstream, and for the case that they migrated from Halmahera, in favor of which are many good arguments.

The initial point of the wandering is of great importance for our chain of islands, for upon that it depends with great probability that the early Polynesians did not come to Nuguria, etc. This would not be altered by the arrival in Liueniua of the boat from Kapingamarangi, for the conditions of current allow us to recognize with certainty such voyages as exceptional. We can make our account always and only with typical phenomena. Wind and current conditions do not allow a decision at variance with the traditions of our islanders, which seem all the more credible since the industrial products as yet met with on the islands quite confirm the essential points of all these statements. The peopling of the northwestern Polynesian islands quite uniformly has its origin in small beginnings, through the coming to shore of crews of for the most part single boats, and through infrequent raiding expeditions. The great majority of the immigrants

came hither from the east, from Micronesian and from Polynesian groups; a distinctly smaller portion went out from Melanesia, a movement which did not assume larger proportions until it came to the southern islands of the series on account of the more peaceful relations with the southern Solomons, with the Deni Group (Santa Cruz), and other neighbors.

It is easy to point out the easy way upon the charts and to prove it easy. To us, in these days of veritable islands which make their way across the seas under impulse of mighty enginery, it is easy to feel convinced that if Polynesians ever did travel far and wide over the stormy ocean in frail canoes held together with stitches, they must have selected the course where the resistance was least. So far a most excellent case has been made out.

But the Polynesians were the most hardy race of daring navigators that the world has ever known. They know which way they came, they have preserved the logs of these ancient voyages when yet the sea was all their own, theirs alone. They were not afraid of the sea, they fought it, and they had no charts to point them to an easier traverse.*

Before we proceed to further examination, it seems proper to interject a brief mention of another presentation of the theory to whose support Dr. Thilenius has brought all the resources of his great acumen. The presentation upon which I would animadvert does not pretend to be a scientific statement. But since it has found its way into print as something proved, I can not feel it time wasted to impugn the *bona fides* of the author who presents it or the source from which he derived it. This pseudo-myth, this rather clever fabrication, is given to the world, at a by no means ungraceful length, in the fourth chapter of Richard Deeken's "Manuia Samoa," a volume of travel sketches which has been somewhat severely criticised from the economic side. With no word of credit to any authority, with all the positiveness of statement proper to the record of approved history, he begins his chapter with the account of a plague in Sumatra: "Niemand kann sagen wann es war, wahrscheinlich jedoch lange bevor Christi Geburt, als auf Sumatra eine vernichtende Seuche wütete; die die junges und altes Leben in Massen hinhordete."

The story is all the more dangerous because well told. He recites the ineffectual efforts to stay the disease culminating in the heroic

*I had written these words several months before the first of such charts was put into the hands of the skilled navigators of the world, the Pilot Chart of the South Pacific for the months of September, October, and November, 1909, issued by the Hydrographic Bureau of the United States Navy. In the three months for which these data are tabulated, months, as I well know, of good sailing in those seas, the currents between the Gilberts and Samoa do not facilitate canoe voyaging, as Dr. Thilenius is so satisfied. The average set is westward and southwestward, and the rate averages between 10 and 50 knots a day.

determination of forty-two of the bravest young men and seven of the fairest maidens (the sacred seven squared by a race to whom four was the perfect number) to offer themselves in sacrifice to the plague demon that he might spare the people. They put to sea in seven canoes, and the plague ceased. The tale now follows these victims oversea, to an island in the Philippines, where seven were claimed by the demon. The second seven was overwhelmed in a gale upon the high sea. The third seven was drawn to abysses of destruction by a fish monster. The fourth seven got drunk on toddy at Nukuoro and blasphemed the god until he slew them. The fifth seven was killed for food on the eastward voyage. The survivors reached Hawaii and refreshed, then sailed seventy-seven nights to the south and came to land on Manu'a.

From what source this tale came to Lieutenant Deeken I can not say. To me it smacks of the ability at fabrication of a half-caste in Samoa whom I was never able to meet, but whose store of traditions was tantalizingly reported as truly remarkable. Their worth may readily be judged from this synopsis of one of them that was brought me at second hand, namely, that the Samoan ancestors set sail from "Sumatala" under the leadership of their hero-chief "Niu-sisila." If one is willing to believe in this preservation of a recognizable name of Sumatra, what shall be said of the prophetic instinct which gives to the voyagers a chief already named New Zealand? Slightly proleptic. Whatever source may be responsible for the myth which Deeken records so positively, I should not rest content without recording its total lack of credibility.

We are now to take up the general migration theory, a division of our subject which may be dismissed with more summary treatment since it is commonly known.

In the foregoing consideration of the sieve theory it will have been observed that Thilenius explains the route of peopling between termini, Malaysia as the point of departure, Samoa or Nuclear Polynesia as the point of arrival. This traverse he covers by a northern and generally equatorial route. Relative to the same termini the general migration theory covers the traverse by a southeasterly course, largely a coasting voyage through or on the fringes of Melanesia. The final link, the distribution eastward from Nuclear Polynesia, remains unaffected by the diverse views herein presented. Similarly the Indonesian link is common to both theories.

That Malayan or Indonesian link, regarded solely as filling geographical space, we may safely assume as an antecedent probability; yet when we reflect that it has been regarded as a linguistic link, although this estimate of its value rests upon high authority and we find the names of Wilhelm von Humboldt, Franz Bopp, and Friedrich Müller associated therewith, we must not be carried away

by the weight of the authority. Skilled as were these distinguished students, I can not avoid the conclusion that their results are vitiated by two sources of error: Polynesia was known to them from scanty and not always accurate information, and Melanesia was scarcely known at all. In the course of the present work we shall have to animadvert upon this Indonesian link in its philologic bearings and, from the material which is about to engage our attention and exact our best powers of analysis, we shall essay to draw certain conclusions which will point to the need of revising the estimate which served as the foundation for the name Malayo-Polynesian, under which designation these languages of the ocean have entered into the classification of linguistic systems.

In its most concise form the general migration theory could not be stated more clearly than in the words of that master of Polynesian lore, Edward Tregear, recently president of the Polynesian Society:

We must leave the fascinating subject of the whence of the Maori as an open question, to be settled hereafter when more full and perfect knowledge enables the student of the future to gather up the ravelled strands of evidence and twist them into a cord that will bear the strain of scientific investigation. In the meantime the Polynesian Society is doing much to gather together the facts and preserve the knowledge fading fast with the elders of the Maori people. It may be of interest to put before the reader the hypothesis most generally accepted by Polynesian scholars as to the advent of the Maori in the Pacific. It is as follows:

The Polynesians are a people which either originated in India or in central Asia and passed through India. Leaving the mainland they journeyed eastward through the Malay Archipelago, occupying perhaps many generations in the voyages from island to island. At the time of their passage the archipelago was not occupied by Malays, who are a subsequent migration from the Mongolian seaboard. The Maori expedition or expeditions passed by the Melanesian and Papuan islands, inhabited by black people (New Guinea, New Caledonia, etc.), and reached the Fiji Group, where they settled for a long time. From Fiji as a center they colonized Samoa, Tonga, Hawaii, the Marquesas, Mangareva, and extended their colonies even so far as Easter Island. In process of time they either hived off or were expelled from Fiji and the waves of migration passed to and fro among the groups of islands. (Tregear: "The Maori Race," page 558.)

So much in the general aspect of the case. Now let us note from another scholar, S. Percy Smith, the present incumbent of the presidency of the Polynesian Society, the traversing in detail of some of the elements of the problem upon which Thilenius founds his argument. These are cited from "Hawaiki" in its second edition. I refer to this edition because it is intended as the definitive statement of the author's position and because it will be the edition most readily accessible. For myself I have a fond preference for the earlier edition, the same materials treated in a different manner. That first "Hawaiki" appeals to me with a personal note

lacking to the rewritten edition; it was the intimate record of the periphus which the distinguished author and myself made in Samoan storm and sun in a tiny boat upon the sea, and of our wanderings over the northern ocean and on the hot slopes of Hawaii.

Of the objection that early Polynesians could not sail against the wind he says:

In the present state of our knowledge of the Polynesians as navigators—about which we shall learn something further on—it is useless for some writers to insist that the prevalence of the southeast trade winds would form a bar to voyages made from central Polynesia to the American coast. The number of easterly voyages on record from various parts and under all sorts of weather conditions is so large that we must conclude these able navigators paid little attention to the trade wind if a sufficient object required them to face it. (Page 40.)

Whatever powers of navigation the people may have possessed prior to their arrival at Java (Hawaiki), the vast number of islands in the archipelago would induce a great extension of their voyages, and generate a seafaring life, through which alone were they able at later periods to traverse the great Pacific from end to end in the remarkable manner that will be indicated. In the archipelago, where most of the islands are forest-clad to the water's edge to this day, the water was the principal highway and this necessitated constant use of canoes; whilst the location of the various branches of the people on different islands with considerable spaces of sea between would induce the building of a larger class of vessels. It certainly seems from the very nature of the surroundings that Indonesia was the school in which the Polynesians learned to become great navigators. (Page 99.)

Having now presented the two opinions on this vital point, this seems a fitting spot in which to record a flaw in the reasoning of Dr. Thilenius which will have suggested itself already to the reader. He is ready enough to admit the possibility of early Polynesians navigating against a head wind from Samoa eastward, while denying their ability to perform the same sort of navigation toward Samoa from Indonesia. Samoa was no Annapolis for this race of seamen; the skill of seacraft which carried them for thousands of miles over eastward ocean was the skill which had brought them over balanced thousands of miles of westward waters.

Where Tregear has outlined the disputed section of the route in general, yet wholly unmistakable, terms, Percy Smith is particular, as we shall see.

Starting from Avaiki-te-varinga, which is probably Java, the route followed by the migrations would be via the Celebes, Ceram, and Gilolo, where, no doubt, were colonies of their own people, to the north shores of New Guinea. Finding this country already occupied by the Papuans they would coast along to the southeast end, where, it would seem, a very early migration settled, which is now represented by the Motu and cognate tribes. This same route was probably followed by the ancestors of the Rarotongans until they branched off past New Britain and the Solomon

Islands on their way to Fiji, probably leaving a colony at Sikayana, or Stewart's Island, off the coast of the Solomons, where the people speak a dialect of Maori or Rarotongan and are Polynesians. Whether Lord Howe's Island, or Liueniua, also called Ongtong Java, was peopled at the same time is uncertain. It is inhabited by Polynesians, as Mr. Churchill tells me. Possibly Nukuoro and Lukunor were also colonized at this time. In more than one Rarotongan tradition an island or country is mentioned named Enua-kura, or the "land of the red feathers," which is possibly New Guinea, so called by the Rarotongans after the bird of paradise, the beautiful feathers of which would be to them treasures of the highest value—such treasures as Europeans who do not know the race can hardly believe in; they were their jewels. (Page 113.)

The same indefatigable research supplies us yet another argument, a persisting memory of intercourse with an inferior and servile race. Because of its length I am forced to omit a few details:

Again, there ought to be traces of some recollection of the black or very dark-brown negrito races of Indonesia. In the Maori traditions there are incidental notices of an ancient people called Manahune or Manahua, who are by some supposed to be a diminutive race and somewhat like the elves of Old World stories. But they are not said to have lived in New Zealand. This people is also known in Hawaii under the same name, where they are described as somewhat like those of the Maori traditions. They appear at one time to have been very numerous and lived in the mountains, but were in a state of subjection to the Hawaiians. Again in Tahiti we find mention of the same people, Manahune, who in Ellis's time formed the lower orders of the people, but they were an ancient tribe or people. In a Paumotu genealogy in my possession I find one of their chiefs named Tangaroa-Manahune, who lived many generations ago; and it is known that there was a tribe in old times in Mangaia named Manaune. We shall find later on a reference to them in Rarotonga history, where they are again referred to as little people. The word *manahune*, both in Maori and Rarotonga, means a scab or mark on the body. It may be that the origin of the name is due to the people who bore it being marked with cicatrices. The vague notions the Polynesians generally now have in regard to the Manahune—their living in the mountains and forests, the wonderful powers of sorcery, etc., accredited to them—seem to point to their having been a race living in the remote past, conquered by the Polynesians, and probably often enslaved by them. In fact the traditions no doubt point to the Papuan or Melanesian race, who, it is well known, mark their flesh in gashes as an ornament, instead of tattoo as with the Polynesians. The same Nga-Puhi tradition goes on to state: "Some of the people of those parts were very black, a people who smelt very strong when near, their hair was bunched out to be stiff and appeared in tufts, and their appearance was ill-favored." This is in brief form a fair description of a Papuan or Melanesian. (Page 103.)

I have preferred to use the words of these two great authorities because they are authorities and because my own conclusions as to the two theories will more properly be presented in the discussion of the pertinent linguistic material.

As between the two theories, we must recognize that each is an attempt to close a gap, the gap between Indonesia and Polynesia

in the race history. Thilenius works it out painfully but coldly, with every resource that may be drawn from the armamentarium of the ocean physiographer. He neglects wholly the record of the only folk who retain any recollection of this great ethnic movement, the corpus of Polynesian tradition. This we shall summarily examine. In the Rarotongan accounts of the voyages and discoveries of Uite-rangioro we find the following list of new lands:

Te Ravaki.	Nu-taara.	Nu-amo.	Iti-takai-kere.	Avaiki.
Rangi-raro.	Nu-mare.	Iti-nui.	Papua.	Kuporu.
Mata-te-ra.	Nu-pango.	Iti-rai.	Tangi-te-pu.	Te Tuiira.
Nu-kare.	Nu-iti.	Iti-anaunau.	Rara.	Manuka.
Nu-takoto.				

These last we have no difficulty in comprehending as Savai'i, 'Upolu, Tutuila, Manu'a—Samoa, in fact, plainly named. A little earlier in the list the four which bear specific names of Iti are quite as clearly the Viti Archipelago. These two points establish the direction of the voyaging, a direction which in the long remainder of the list, after the mention of Samoa, covers the eastern Pacific. It is not improper, then, to reason back in the same direction from our two known points and assign to the unidentified places a position somewhere between Viti and Indonesia.

CHAPTER IV.

THE FIRST POLYNESIAN HOME.

A race always under an eastward momentum—No positive statement of the place of origin possible—Bopp proposed an Aryan source—Max Müller connected it with the Turanian stock—Logan regarded the Ganges Valley as the ancient home—Macdonald's Semitic theory of a great and widely diffused Oceanic language set forth at large.

Noting that the Indonesian area presents its own group of problems relative to the Polynesian, which have yet by no means come to a satisfactory solution, we pass for the present to a summary statement of the theories which have been proposed in elucidation of the Polynesian migration before its entrance upon the Malayan region.

Wherever we know this race we find it under a momentum directed eastward, under the impulse of some power behind, which has sufficed to overcome the inertia of a race settled as autochthons. But what that power may have been, what the place of autochthonous settlement, we are without positive information.

Beyond peradventure we recognize the momentum toward eastern Polynesia from Nuclear Polynesia. In Nuclear Polynesia we recognize the momentum, some of it from Viti. In Viti we are more and more distinctly certifying ourselves of the same momentum exerted along intervening steps of the Melanesian archipelagoes from the Malayan exits. In Indonesia we find the same momentum from Sumatra toward the east. But behind Sumatra, the Malayan entrance, while we may believe in the impulse, we are at a loss to find the next earlier point from which dislodgment was made. Yet, as the direction sense remains constant, we need have no hesitation in looking toward the west.

The first great guess at a point of origin we owe to Bopp in his classic study (1841) "*Über die Verwandtschaft der malayisch-polynesischen Sprachen mit den indisch-europäischen.*" His effort was to establish these sea wanderers as an early, perhaps the earliest, offshoot from the stock which, after long wanderings otherwhither, has produced our race.

After discussion of the same material Max Müller evolved the theory that the sea people, by then definitely accepted as Malayo-Polynesian, were related to the Turanian through the Thai of Siam. Later students along the same line have reached a similar conclusion through the Mon-Khmer.

Percy Smith (in "Hawaiki" *passim*) follows the conclusions of J. R. Logan in seeing the more probable seat of the early Polynesians in the Ganges valley. Logan himself says, in his "Ethnology of the Indo-Pacific Islands:"

I was especially struck with the constantly accumulating evidence of the derivation of the leading races of the islands (Indonesia) from Ultra-india and India, and was led to the conclusion that the basin of the Ganges and a large portion of Ultraindia were occupied by tribes akin to the Malayo-Polynesians before the movement of the Aryan or Indo-Germanic race into India.

A survey of the character and distribution of the Gangetic, Ultraindian, and Asianesian (Indonesian) peoples renders it certain that the same Himalayo-Polynesian race was at one time spread over the Gangetic basin and Ultraindia. As this race is allied to the Chinese and the Tibetan, it is probable that it originally spread from Ultraindia into northeast India.

We shall now proceed to the presentation of Dr. Macdonald's Semitic theory, premising that in his writing Oceanic race and Oceanic language are an anticipation of the proof of his deductions. This he explains in the following form:

These three groups of languages and dialects—the Malayan, the Polynesian and the Melanesian—naming them in the order in which they have successively become known, are, as Friedrich Müller has shown, members or branches of the Oceanic, which is as perfectly well-defined a family of languages as is the Semitic or the Indo-European. The Oceanic is, as its name indicates, insular. Its habitat, which we may call Oceania, stretches from Madagascar off the east coast of Africa, across the Indian Ocean to the Malay Archipelago, and on through the Pacific Ocean to Easter Island. On the north it has invaded from the island world and settled only on the southeastern extremity of the Asiatic continent, hence called the Malay Peninsula. On the south it has not reached the Australian continent, though closely approaching it in New Guinea. The islanders who speak Oceanic number about fifty millions, or one-thirtieth of the human race.

To say that the Oceanic languages are a perfectly well-defined family is to say that they are all sprung from one mother tongue—the Oceanic mother tongue; and to establish the Asiatic relationship of the Oceanic is to establish that that mother tongue was originally carried by its speakers from the Asiatic continent to the island world. * * *

It is not until we take into account the linguistic data that we get upon the solid ground of certainty. And first of all it is to be observed that though there was an element of negro blood in the race, due to intermixture, the race itself, as its language proves, was not negro. What that race was can only be determined from its language, and what that mother language was is to be learned from an examination of its descendants and representatives, the spoken Oceanic languages and dialects of the present day. If the race came from the Arabian Peninsula, the Semitic motherland, sprung from the people of the commercial empire that existed there, then their language was Semitic. For the Phenicians, the people of that ancient South Arabian empire and of their Abyssinian colony, and their descendants now in Abyssinia and Arabia, all are Semitic speakers. If the race

came from the Indian Peninsula one might suppose with Bopp that the language was Indo-European; if from the Indo-Chinese Peninsula, with Max Müller that it was Scythian or Turanian. The problem thus, as is clear, can only be solved linguistically; and the praiseworthy efforts of Bopp and Müller to solve it are valuable if only as having led to the certainty that the Oceanic mother tongue was neither Indo-European nor Turanian. Their attempts failed because made on insufficient data, and their methods were for the same reason inadequate * * *

When we say that Arabia was the motherland of the island family of languages, this does not mean that the primitive Oceanic tongue—of which the multitudinous dialects of Oceania as at present spoken are the analytic or simplified descendants, as English is of Anglo-Saxon, or the Romance dialects of Latin—was derived from the Arabic; but that Arabia was the motherland of the primitive Oceanic as it is of the Ethiopic, Amharic, and Tigre, and of the Assyrian, Phœnician, Hebrew, and Aramaic. If it had more in common with Arabic than with any other Semitic language, that is because Arabic has more than any other preserved the features of the primitive Semitic tongue, the common mother of all of them. The primitive Oceanic must be regarded, not as a descendant of, but as a sister to the Arabic, Himyaritic, Ethiopic, Assyrian, Phœnician, Hebrew, and Aramaic and the Efaté, Samoan, Malagasy, Malay, etc., as cousins to the Mahri, Amharic, Tigre, Mandaitic, Modern Syriac, and vulgar Arabic dialects, due allowance being made for the fact that these latter have always been more or less under the conserving influence of the surrounding Semitic literature and civilization, from which the island dialects have been for ages completely cut off, as well as completely isolated from each other.

It should be premised that Dr. Macdonald's argument, loaded with minute details and seldom stating clear principle, is nowhere lucid. The profundity and the breadth of his Semitic erudition will be estimated by each student in proportion as he is fitted to pass critically upon such topics. From the confusion of statement tangled with partial proof involving more statement with yet more proof I have endeavored to present a simple syllabus of his argument:

A.

The gist of our author's chapter on Oceanic phonology, a plexus of multitudinous detail, is this:

1. Letters interchange freely within their own vertical series.
2. Letters interchange freely as between series and series.
3. Letters conveniently efface themselves, whether initial, medial, or final.
4. Initial syllables may drop off.
5. Initial syllables may be added "to lighten the pronunciation."

Granting all or most of these postulates, it will be seen that no particular limit need be set to philological comparison. For such proof as these positions seem to require the student will have to follow out the intricacies of Dr. Macdonald's argument to such conviction as he may be able to discover.

B.

Dr. Macdonald now plunges into the critical test, that trilateralism of the root which has stamped the Semitic as a speech apart. It is so vital to his contention that the thesis must be presented in his own words:

It is now to be shown that the Oceanic primitive language had, like each of its sister dialects, Arabic, Assyrian, etc., its share of the common stock of purely and exclusively Semitic trilateral words (nouns and verbs) with the purely Semitic common method of word formation or inflection by internal vowel change and external additions (prefixed, infixed, suffixed) and its share also of the limited common stock of purely Semitic particles. This, if it can be shown, will be admitted to be conclusive. The particles will be dealt with subsequently.

The ancient Semitic finite verb, with its perfect and imperfect, was simply a verbal noun joined in a certain way with the personal pronouns, and with it or from it other and numerous verbal nouns were formed by vowel changes and external formative additions. The ancient finite verb with its perfect and imperfect so formed is no longer found in the existing broken-down Oceanic languages, though as analytic substitutes for it we have as the finite verb, for instance, in Efatese "the verbal pronoun" joined with these verbal nouns after the fashion of the imperfect; as a *bano* I (am or was) going, equal to I go (or I went), and in Malagasy the "pronominal adjunctive" joined with these verbal nouns, after that of the perfect, as *tiaku*, my loving, equal to I loved or I love. The verbal nouns that were formed with or from that of the ancient finite verb were numerous, and in them we have the ground forms of the modern Oceanic verb. * * *

We now proceed to compare the Oceanic trilateral words with Arabic, Assyrian, etc., just as, for instance, we compare, say Assyrian or Himyaritic words with Arabic, Hebrew, Syriac, or Ethiopic.

Take the simple Efaté *lifai*, to bend round; *malibai*, bent; *lofa*, a thing bent; *lofai*, to bend; *malofa*, bent; *kalofa* or *kolofa*, bent; *lufa* (Samoan *lavalava*), a wrapper round the loins; Samoan *lofa*, to crouch; *lofata'ina*, to cause to crouch; *lave*, *lavelave* (Arabic *lafelafa*, to wrap round, etc.), to entangle; *lavelavea*, to be entangled; Fiji *love*, *lovedha* (Samoan *lavasi*), to coil, to fold, to bend; *kalove*, bent; *salove*, flexible; Malay *lipat*, *lampit*, *lampis*, *lapis*, a fold, to fold, to plait; Malagasy *lefitra*, also *lufitra*, folded, bent, plaited; Arabic *laffa*, to be involved, intertwined, to wrap up, wrap round (oneself, as clothing), to fold; *laff*, *liff*, *laffat*, *liffat*, involved, intertwined, etc.; *loffa*, *loffat*, coil of turban, winding of road. In this example the six commonest forms of the modern Oceanic verb (or noun), the ancient verbal noun, are seen, viz:

- | | | |
|------------------|--|---------------------|
| 1. <i>lave</i> . | 3. <i>lofa</i> , <i>love</i> , <i>lufa</i> . | 5. <i>lipat</i> . |
| 2. <i>lija</i> . | 4. <i>lampit</i> , <i>lavasi</i> . | 6. <i>lovedha</i> . |

The inference is irresistible that in the Oceanic primitive or mother tongue this word was trilateral, and had the vowel changes peculiar to the Semitic languages most fully preserved in the ancient Arabic; and that as a trilateral word with the middle radical doubled it underwent the usual contractions, set forth in all Semitic grammars, of such words, as is plainly seen by comparing it with the Arabic. These forms, originally verbal nouns and still often used as such, formed from the ancient finite verb, as *lipat*, a fold, *lofa*, a thing bent or bending, have become ground forms

of the modern verb, as *lipat*, *lipatkan*, to fold, *lofai*, to bend; from which again are formed, by external additions, modern verbal nouns and derived verb forms. Thus we have *lipatan*, a fold; *lofaian*, a bending or being bent; *lavelavea*, entangled or entangling, *malibai*, bent; and the derived verb forms—

Safal.....	Fiji <i>salove</i> , flexible.
Mafal.....	Malay <i>malipat</i> , to fold, plait; Efaté <i>malifus</i> , bent, flexed.
Mifal.....	Malagasy <i>milefitra</i> , folded.
Tafal.....	Fiji <i>kalove</i> , Efaté <i>kalofa</i> , bent.
Manfal.....	Malagasy <i>mandefitra</i> , to fold, bend.
Matafal.....	Samoa <i>fa'alave</i> , to take a turn of a rope as round a pin.

As seen in this example the vowels of the ground forms of the Oceanic verb are retained in the modern derived forms and verbal nouns. It is in the ground forms, therefore, that we find the proof of the part played in the ancient language (the primitive Oceanic) by internal vowel change.

To show that this is a fair specimen of modern Oceanic words, that it is not exceptional but only one out of the mass and of a piece with the rest, would prove conclusively that the Oceanic primitive or mother tongue had, like each of the sister dialects, Arabic, Assyrian, etc., its share of the purely and exclusively common stock of Semitic triliteral words with the purely Semitic common method of word formation or inflexion by internal vowel change and external additions. This then is what we have now to endeavor to show.

This he follows by an example of intricate ingenuity in bringing many insular words under one or other of eight types of trilaterals; and thus concludes:

These examples sufficiently show that the above Oceanic word first given (*lifai*, etc.) is not exceptional, but only one out of the mass and of a piece with the rest, and this conclusively establishes, etc. [in the same form of words as before, a protracted Q. E. F.].

C.

He next takes up the subject of prefixes, infixes, and suffixes. Employing the freedom of phonetic treatment which he has already postulated in his chapter of phonology, he identifies every form of these inflectional or word-forming elements known to Semitic speech with word components in Malayan, Melanesian and Polynesian. The value of such identification is wholly conditioned by the adhesion which one inclines to give to his system of sound mutation.

D.

The last chapter of the presentation of the theory rests upon the pronouns and particles, the demonstrative elements of speech. With remarkable patience in research, and with even more remarkable generosity of treatment, he satisfies himself that he has detected the same kinship in this section of the compared vocabularies. Yet, while permitting himself the use of this material and erecting much of the edifice of his argument thereupon, he takes the similar

use of the same class of data by other students as the basis upon which to combat their conclusions when they differ from his own. He says of his predecessors in this field:

They trusted mainly if not wholly on the comparison of words, chiefly the pronouns and numerals, in which there is always great liability to error, and which apart from comparison of grammar and structure can never be conclusive. As to the pronouns, for instance, Bopp, and Max Müller following him, chose to regard the Malay *kita*, *kami*, we, and *kamu*, ye, as composed of an article *ki*, or *ka*, and the pronouns *ta*, *mi*, *mu*. This enabled Bopp to compare the latter with the Indo-European pronouns, and Max Müller, it should be added, to compare them with equal probability or improbability with the Turanian; and by this method the Oceanic pronouns might just as well be compared with any others whatsoever. The fact is, as the Melanesian clearly shows, that this *ki*, or *ka*, is not an article at all, and that this comparison of Bopp, and also that of Müller, founded on the notion that it is, is illegitimate and futile.

In this chapter it has been my aim to present the line of Dr. Macdonald's argument as simply as possible; to avoid, wherever it might be done, the complexity and intricacy of the detail of his method; and in general to refrain from debating the controversial points which arise, the latter pleasure being reserved for the critical examination of his material, upon which now we shall enter.

CHAPTER V.

DISSECTION OF THE THEORY.

The result of independent treatment of the data should be identical—As the other elements have long been known and carefully studied, the Melanesian is the critical test—The computation of exactly what material is now made available for study—In what proportion the Efaté vocabulary contributes to the solution of the problem and the manner in which properly it may be employed.

The force of Dr. Macdonald's argument, the proof of the theory thus summarily outlined, must rest upon the data which he has utilized for its development. Those data we find available in the vocabulary which he has given us as a complete dictionary of Efaté. He has made use of this material in a certain fashion, such as most commended itself to his thought; he has prosecuted long and painfully a certain method. All this was within his prerogative. If the theory be valid, if the method be true, the same data should yield the same result, and no other than the same result, when studied in accordance with such other method, being valid, as may commend itself to another philological investigator.

This it is which is now to engage our attention. We are to take his data, his vocabulary material assumed to be in itself accurate, to argue it afresh and, I feel confident, without preconception or other such prejudice, and let it lead us where it may.

If really there be an Oceanic speech family tree, with its roots in the Hadramaut and its distal twigs in Te Pito te Henua, then we may expect to find in the material in the course of this examination such a mass of words showing clearly a nexus of development—enabling us thereby to establish a distinct and probable law of the mutation of sounds—that we may finish the investigation with the happy satisfaction that the Oceanic tongue has proved itself.

We are not to ask that every Polynesian word shall reveal to us through the operation of this law of mutation its primitive trilateron in some Semitic household. We are by no means to expect that we can take any Semitic stem and by the application of the rule develop the succeeding forms in Indonesia, Melanesia, and Polynesia. Not even Grimm's law will do that for us in the Aryan family. But we do have the right to expect that, if there prove to be a substantial base for this theory, there be a sufficiency of examples in each direction and a consistency in their establishment.

Dr. Macdonald has presented a captivating theory of an Oceanic family wandering from a Semitic home, bold sailors over unknown seas and far from the tents of Kedar. This theory must rest on the data which he presents to us. If it be valid, the data must yield the same result to independent examination.

This Oceanic speech family comprises four households. The Polynesian is known intimately, the Malayan has been even more extensively studied, the Semitic has engaged the attention of the most able scholarship for centuries. The Melanesian is now just being admitted to the family circle; it has been scarcely known until the publication of this Efaté work.

But the position of this new household is significant geographically, for it bridges the gap between Indonesia and the nearest point of Polynesian culture. We are therefore warranted in expecting Melanesia, on this theory, to establish its articulation with the Malayan speech group in one direction, with the Polynesian tongues in the other, and internally we look to find some thread of interrelation between Efaté and such other languages of Melanesia as are known at all. In the order of antecedent probability, a mathematical deduction as generally applicable as an algebraic equation, these associations should be arranged in the following order:

Melanesian interrelations; the most frequent.

Indonesian and Polynesian articulations; either equal in frequency or exhibiting a slight preponderance toward the Indonesian.

These two terms are immediately limiting. Established cases in which the two terms are combined will have a great weight. Similar weight will attach to examples which are found common to Melanesia, Indonesia, and the Semitic. The examples which can be established in an indisputable chain from Polynesia through each link back to the Semitic will be compelling evidence.

These are the matters which we are to look for in the exploration of the material, in independent study of the Efaté dictionary.

In an earlier chapter I mentioned the number of the dictionary entries, 3,657, and I gave that as the result of a count seriatim. The operations of arithmetic did not cease with the attainment of that figure. I made a table of all the words for which Dr. Macdonald claimed relationship with other households of his Oceanic family. This table I now present, for it contains matter of note. In it I have cast out the purely demonstrative words. Since I have shown that Dr. Macdonald is willing to base his own theory upon them to a certain considerable degree, but is averse from allowing their use to other inquirers, I think it preferable to put them aside lest I be classed with Bopp and Max Müller.

In this table I have made use of the convenience of abbreviations, M for Melanesian, V for Viti, P for Polynesian, My for Malayan, S for Semitic. With each entry the name Efaté is to be understood. Thus the first entry in the table, M 31, signifies that Dr. Macdonald notes 31 words in which he finds for Efaté relation with some language elsewhere in Melanesia, but without recognizing further affiliations. Similarly the final entry signifies that he has found 29 words in Efaté for which he provides identification with words along the whole chain from Polynesia to the Arabian Saba.

In such a study as this the position of the Fijian speech is anomalous. It is neither wholly Melanesian nor pure Polynesian. As in part it may be claimed for each household, there seemed but one way of securing fair treatment wherever it chanced to be involved in this investigation; namely, to set it apart and in each instance to sift out the Melanesian or the Polynesian affiliation.

M		V		P		My		S	
M	31	V	22	P	67	My	43	S	346
MV	3	MV	3	MP	9	MMy	10	MS	31
MP	9	VP	9	VP	9	VMy	7	VS	30
MMY	10	VMy	7	PMY	17	PMv	17	PS	103
MS	31	VS	30	PS	103	MyS	100	MyS	100
MVP	1	MVP	1	MVP	1	MVMY	0	MVS	6
MVMY	0	MVMY	0	MPMY	3	MPMY	3	MPS	22
MVS	6	MVS	6	MPS	22	MMYs	28	MMYs	28
MPMY	3	VPMY	9	VPMY	9	VPMY	9	VPS	25
MPS	22	VPS	25	VPS	25	VMyS	26	VMyS	26
MMYs	28	VMyS	26	PMYs	95	PMYs	95	PMYs	95
MVPMY	4	MVPMY	4	MVPMY	4	MVPMY	4	MVPS	8
MVPS	8	MVPS	8	MVPS	8	MVMYs	6	MVMYs	6
MVMYs	6	MVMYs	6	MPMYs	24	MPMYs	24	MPMYs	24
MPMYs	24	VPMYs	44	VPMYs	44	VPMYs	44	VPMYs	44
MVPMYs	29	MVPMYs	29	MVPMYs	29	MVPMYs	29	MVPMYs	29
Total	217		229		468		443		923
P. ct.	5.93		6.20		12.79		12.11		25.24

The total of the words for which his ingenuity has suggested affiliations outside the island of Efaté is 1,154, or 31.55 per cent of this dictionary, which he calls complete. That is to say, for not so much as one-third of the vocables in the language of Efaté can his liveliest fancy—how lively that may be we shall see hereafter—find any sort of ground for his promise of “the Oceanic languages, their material or vocabulary set forth in a complete dictionary of one of them.” Furthermore we find that an even smaller number, in effect no more than a quarter of the whole number of entries, covers all the suggestions of Semitic affiliation which he has ventured upon. Compare his claim that no more than 29 words establish the complete chain from Arabia to Samoa with his identification of 346 words which connect Efaté with the Semitic without having left a trace elsewhere in Melanesia or anywhere throughout the

varying languages of Indonesia. As soon as he attempts to link Indonesia in the backward bight of the chain, his figures fall to 100, and when he links in Melanesia he finds but 28 available words. Accepted even at his own valuation, philologically a most faulty one, these are but small foundations for so lofty an erection of a Babel building which is to confound Max Müller and other names by no means inconsiderable in systematic philology.

In these studies my position is eastward. From Polynesia I am looking through all available linguistic material toward the west, hoping to find some data that will establish the partition of the Polynesian and the Melanesian elements in Viti, welcoming anything that promises to enable us to comprehend the Melanesian in areas where its proportion in speech is the more considerable, rejoicing at the accession of new knowledge which will equip us to give better study to the possibility of some manner of proof that kinship does or does not exist among Polynesian, Melanesian, and Indonesian, convinced that only as we establish these three links of the chain in positive knowledge can we approach the yet earlier history of these tongues with clear sight.

In Dr. Macdonald's material I see three classes of data.

1. A central area, Melanesian material for which we have not yet established connections with either of the known areas, Polynesian and Indonesian, respectively. We therefore want the means to subject this to comparative study, and on this account it remains unavailable.

2. An eastward extension, through so much of Melanesia as is known, to the well-established knowledge of Viti and Polynesia.

3. A westward extension, through Melanesia to the equally well-established knowledge of the Indonesian; and, yet more remote, Dr. Macdonald's confident projection to the Semitic.

The second class is that which shall provide the instruments for our study of these data upon which we are now to engage at much length and with the utmost attention to the minuteness of detail. The Indonesian languages, and in yet greater measure the Semitic tongues, have their own enthusiastic students, and to such we may confidently leave the prosecution of similar research from the vantage-ground of their own knowledge, in case this ambitious theory should seem at its western extremity as proper a subject of debate as it does to those of us who are engaged at the eastern extremity.

In the following detailed study I have purposely omitted many examples, for simple inspection will show our author patently in error. At the same time I have endeavored to afford room for all such as seemed at least debatable. The process of elimination will be continued in these studies.

CHAPTER VI.

EFATÉ AND VITI AND POLYNESIA.

Comparison of the vowels of the Melanesian element of Efaté and Viti—The establishment of consonantal variety—The assumption of a parent speech from which these deviate—The Viti appears to be the younger son—The comparison continued through the Sawaiori element of Viti—Viti, Samoan and their parent speech, the Proto-Samoan—Comparison of Efaté with Polynesian and summation of results—The extent to which Efaté identifications penetrate into Polynesia—Argument from recorded anomalies—It is improbable that Efaté received its Polynesian content through westward drift of castaways—Proof that this element came through the migration of Proto-Samoan wanderers—Check-list of Polynesian phonetic mutations.

At the eastern extremity of the language groups which it is sought to associate into this Oceanic family we have two firm, if unsaintly, foundations, the Polynesian (or Sawaiori of Whitmee's proposed nomenclature, convenient even if not wholly acceptable), and the Viti. Such element of the Viti, somewhat less than half of the vocabulary according to my estimate, as is not identifiable with the Sawaiori we assume to be of Melanesian origin. The larger element we shall consider in its clear connection with the Sawaiori. We shall examine the Efaté first in its relation to the Melanesian Viti; thence we shall proceed to the examination of the Efaté in its relation to the Sawaiori with the inclusion of so much of the Viti as properly pertains to that stock; last of all to the consideration of the element of Efaté which appears in the Sawaiori without having left an impress upon the Viti.

The data 1-47 in Appendix I enable us to complete our conspectus of the material in Efaté which is identifiable with that element in the carefully wrought-out Viti vocabulary which has not been identified with any of the equally familiar tongues of Polynesia. Two explanations here are possible: the former that this is truly a portion of the Melanesian component of Viti; the latter that this element is Polynesian, but that it has failed of preservation in the eastward languages. The former we adopt provisionally as by far the more probable.

Now let us sum the observations as to the phonetic relations of Efaté and the Melanesian component of Viti, and first the vowel system.

By far the largest mass of vocalic dissimilarities in the data under study lies within the area of the neutral vowel. I have* already

*17 Journal of the Polynesian Society, 87.

had to deal with this matter in the consideration of the phonetics of the more strictly Polynesian languages. The same holds true, *mutatis mutandis*, of these two Melanesian tongues. I cite the earlier discussion of the subject:

A man with a quick ear and an obedient tongue may, as the result of long discipline, acquire almost perfect use of the Samoan consonants, but it is most probable that no Caucasian has really mastered the art of the Samoan vowels. It is as in their music: the intervals, the supertones, and the fractions of the tone are developed on a system which we find it impossible to acquire. It establishes a new group of units of vibration of the vocal cords, for which the fundamental diapason of our own speech is not set in unison.

With this in mind, we shall find a plain explanation of the central triangle of the vowel changes if we regard the short *ä*, *ë*, *ö* as merely so many approximations to a primal obscure short vowel which lies centrally situated in respect of these three apical points. One congeries of the Polynesian tongues may have had a vibration series and period which inclined its use of the primal obscure vowel somewhat in the *ä* direction; to another congeries the *ë* component was the more grateful; to yet another the tendency was in the *ö* or labial grade. * * * Thus we have no hesitation in taking this central triangle of *ä-ë-ö* out of the group of vowel changes in Samoan, of regarding it as no more than a doubly muffled rendering of a single central sound, and of removing it entirely from consideration among the criteria of vowel changes as dialectic indicia.

When we diagram upon the common alphabetic scheme the vowel changes not in this class, we find some interesting developments. Along the palatal strut, that which rests upon *i* and peaks in *a*, in the data thus compared we find but a single instance of the dialectic vowel change *a-i* in *bila* (12) to pick up Viti *vili*, and of *i-e* in *seri* (22) to loose a tabu Viti *sereka* to untie; and the weight of these instances is considerably lessened by the fact that they lie in an unaccented syllable, and a terminal one at that, unaccented terminal vowels in Viti being evanescent.

On the labial strut, from *a* to *u*, most of these vowel changes are seen to lie. The maximum frequency, four instances, is found between *o* and *u*, the change *u-o* is seen in *bure* (14) to wash Viti *mborea*; *lume a* (19) to dip Viti *lomotha*; and *suba* (33) to break Viti *sovetaka*; the change *o-u* in *mako* (41) offspring Viti *makumbu* grandchild. A change over a slightly longer interval, *o-a*, is found in *tröm* (38) turmeric Viti *ndamu*, red. A still longer gap is found in *a-u* in *bera* (27) to crumble Viti *vuruvuru*; and in the reverse direction, *u-a*, in *mutrei* (5) breadfruit cake Viti *mandrai*.

There remain three changes which vary from the foregoing simple system of vocalic mutation along one or the other of these struts, for they cut across diagonally. Of the change *e-u* we have two examples, in *tefa ki* (24) to range Viti *tuva*, and in *bera* (27) to crumble Viti *vuruvuru*. The change *i-o* is found in *bori* (28) to break Viti *vorota*; and *u-i* in *lubwa* (30) to pour out Viti *livia*.

We now proceed to the examination of the consonant scheme of the two languages. They thus appear in the diagram:

	<i>Efaté.</i>			<i>Viti.</i>		
Semivowels.....	y	r, l	w	y	r, l	w
Nasals.....	ng	n	m	ng	n	m
Sibilants {Sonant.....	—	—	—	—	—	—
{Surd.....	—	s	—	—	s	—
Spirants {Sonant.....	dh(t')	—	—	—	dh	v
{Surd.....	ch	—	f	—	—	—
Mutes {Sonant.....	g	—	b	ngg	nd	mb
{Surd.....	k	t	—	k	t	—
	(kw-bw-kb)					
	(ngm-ngw-mw)					
	ts					
	tr					

The constant consonants are *ng, k, l, n, s, m*; the constant mutation is *f-v*. It does not seem advisable, in the limited supply of data, to essay the quantitative weighting of the mutations; but in qualitative examination it seems altogether permissible to deduce a scheme of the consonant skeleton of the common ancestor from which derive the *Efaté* and the Melanesian component of *Viti*. This we shall designate the *Efaté-Viti* parent speech, and for convenience shall refer to it by initials *E-V*. In this diagram we present in each triple entry the *Efaté* consonant at the left, the parent in bold-face type, the *Viti* at the right:

Efaté-Parent-Viti.

	r-r-r, l	
	l-l-l	
	tr-r-ndr	
ng-ng-ng	n-n-n	m-m-m
—	—	—
—	s-s-s	—
(ch)	dh-dh-dh	b-v-v
g-g-ngg	—	f-f-v
k-k-k	t-d-nd	b-b-mb
	t-t-t	b-p-mb

The characteristic Melanesian compounds, *kw-bw-kb, ngm-ngw-mw*, and *ts* are left unplaced in reference to *E-V* by reason of the fact that this particular group of data affords no opportunity to link them to the known physics of the *Viti* consonant structure. Abundant material for their intimate study will be afforded us later in the work. For the present, our comments on the results thus far attained shall be summary; the discussion will properly follow upon the similar analysis of the remaining data, so much more voluminous.

If we examine the diagram attentively we note the particular features in which the offspring equally favor the parent. In the upper portion the resemblance is perfect; the nasals and sibilants are the same; so, in effect, are the semivowels; so the sonant lingual spirant, and of the surd mutes the palatal and the lingual. In

the palatal series and again in the lingual series only one of the two inheriting languages falls away from the ancestral estate and that in but a single item in each series. In the labial series both languages have lost, and in equal measure, a possession of the parent. In the comparison of the two junior languages we shall see that the Efaté more nearly takes the property as heir-at-law, and the Viti is struggling to keep a younger son's uncertain hold upon the family possessions. The proof of this lies in our comprehension of the inward significance of the reinforced or prefaced consonants.

Both languages show the impossibility of reproducing the uvular *r* without a conscious effort to produce a sound for whose expression the buccal organs lack training. The effort takes the same form; Efaté with its *tr* shows a shade less exertion to be necessary than the Viti *ndr*. In all other cases where Viti employs the nasal of the same series, namely, in the three sonant mutes, it is seen that Efaté is able to take the sound without assistance. This makes it clear that Efaté, lying relatively toward the west, closer approaches E-V than Viti, which lies so far at the eastern verge of Melanesia as to have been overlaid deeply by Polynesian sounds, forms, and usages.

So far as these two points may determine the line, so far as the comparison of the two tongues shows the direction along that line, we look for E-V at some point on the line produced beyond Efaté. Now the inspection of our charts shows that the line produced westward beyond Efaté is immediately drowned in empty sea. We may, then, look for the E-V parent either among the islands lying south of the central New Hebrides or among those lying in the northern area. So far we have considered but these two points; we need new points to establish to our satisfaction what becomes of that line when once it turns the corner at Efaté. The remaining data, which we are now to study, will tend to acquaint us with these points. That is the definite object which the close scrutiny of this store of newly available Melanesian material has presented to my investigation.

TABLE A.

Viti.	Proto-Samoan.	Samoan.	Viti.	Proto-Samoan.	Samoan.	Viti.	Proto-Samoan.	Samoan.
a	a	a	u	—	o	h	h	—
e	(Obscure vowel)	e	u	u	u	dh	h	s
a		a	o	—	u	dh	s	s
e		e	a	—	u	s	s	s
i	i	i	y	y	—	mb	v	v
i	—	e	r	r	l	mb, v	f	f
e	—	i	ndr	r	l	ngg, k, dh	k	'
u	—	i	l, n	l	l	t, nd, k,	t	t
a	—	—	ng, v	ng	ng	dh, s		—
o	n	o	n, ng	n	n	mb, v	p	p
			m, ng	m	m			

We shall next pass under review the comparison of Efaté with that element of Viti which has been proved to be Polynesian. The data for this study will be found under the items 64-72, 121-146, 186-238, 272-365.

Before entering upon this examination we present a tabular aspect of the mutations between Viti and Samoa as derived from the discussion of the 465 words in the Viti dictionary which are satisfactorily identified as Polynesian, and to collocate therewith the Proto-Samoan as in the relation of parent. (See table A, page 38.)

TABLE B.

E	V	P-S	S	Data.				E	V	P-S	S	Data.				
a	a	a	a	{	320	322	324	339	ng	ng	ng	ng	(12 cases)			
e	a	a	a		340				m	ng	ng	ng	199			
i	a	a	a		232	322	324		n	n	ng	ng	125			
o	a	a	a		195	357			k	k	k	'	(28 cases)			
u	a	a	a		129				ng	k	k	'	136 297 299 361			
a	e	a	a		70	188	307		—	ngg	k	'	188			
a	u	a	a		144	202			k	ngg	k	'	191 202 224			
e	e	e	e						ng	ng	k	'	135			
a	e	e	e		134	203			s	s	s	s	(12 cases)			
i	e	e	e	{	203	210	297	338	t	s	s	s	232			
o	e	e	e		354				s	dh	s	s	{ 65 143 298 337			
a	a	e	e		189				s	s	—	—	{ 341 342 344			
e	i	e	e		121	126			s	dh	h	—	{ 206 339			
i	o	e	e		65				s	dh	—	—	{ 72 215 338 340			
i	i	i	i		191				—	dh	h	—	{ 352 363			
e	i	i	i		204	319			f	dh	—	—	274 278			
o	i	i	i		196				t	t	t	t	(34 cases)			
a	a	i	i		225				t	nd	t	t	{ 208 347 348 349			
a	e	i	i		237				t	dh	t	t	{ 350 353			
u	u	i	i		298	305	362		t	s	t	t	70 141			
e	u	i	i		133				s	s	t	t	133			
o	o	o	o		137	138	205		t	s	t	t	238			
a	o	o	o		349				m	m	m	m	(25 cases)			
e	o	o	o		205	231	331	353	m	ng	m	m	313			
i	o	o	o		219				b	m	m	m	191			
u	o	o	o		314				f	v	v	v	296			
u	u	o	o						b	v	v	v	307			
a	u	u	u		273				f	w	v	v	291			
i	u	u	u		134	284	321	341	b	w	v	v	281			
o	u	u	u		125	286	273		bw	w	v	v	189			
a	o	u	u		129				f	v	f	f	(10 cases)			
u	o	u	u		138	194			b	v	f	f	(13 cases)			
l	l	u	u		288				u	v	f	f	206 273 363			
r	l	u	u		(27 cases)				—	v	f	f	360			
l	l	l	l		(11 cases)				b	mb	f	f	273			
l	r	r	l		123	138	311	315	bw	mb	f	f	133			
r	r	r	l		341				b	mb	p	p	{ 65 125 190 192			
l	r	r	l		132	136	225	327	bw	mb	p	p	{ 207 285 289			
r	ndr	r	l		336	355	359	364	f	mb	p	p	{ 124 128 139 218			
r	ndr	r	l		272				b	v	p	p	279			
n	n	n	n		334	335			bw	v	p	p	134			
n	n	n	n		296				—	v	p	p	45 284 286			
f	v	—	w		295					v	p	p	361			
													361			

The mutations properly referable to the parent neutral vowel are very numerous. The less frequent vowel mutations are here set down with the authority on which they rest, and in case of material involved in this collection of data the serial number is appended for convenience of reference.

i-e *siapo-seavu*. Note, the mutation **e-i** is extremely common.
i-a *ofanga-ovi*.
i-u *'ili-kuli* (294), *milo-mulo*, *isu-uthu* (289), *ilo-uloulo* (334).

u-i *tulu-tiri* (332).
u-o *'uli-koli* (118), *lofia-luvu* (253), *mafai-mavo*, *ufi-ovi*, *jangu-vango*.
u-a *ngungulu-ngalo*, *liu-lia* (197).

The less frequent of the constant mutations are these:

l-n *lama-nama*, *lamu-namu*.
ng-k *anga-dhaka*.
ng-v *lingi-livi* (103).
n-ng *sina-singasingau*.
m-ng *lima-linga* (313).

k-dh *se'e-dhedhe*.
k-ng *'i-ngi*.
t-k *tupoto-tumboko*.
t-s *lata-lasa*, *uta-usa* (238).
t-dh *tofe-dhove*, *matata-madhala*.

TABLE C.

E	P	Data.	E	P	Data.
a	a	(73 cases)	<i>m</i>	ng	246 264
e	a	{ 53 95 117 157 163 164	<i>mw</i>	ng	167
		165 256 268	<i>k</i>	ng	248
i	a	63 86 117 175 178 258	<i>g</i>	ng	248
o	a	95 109 161 181	<i>t</i>	ng	61
u	a	86 167 250	<i>k</i>	'	(21 cases)
e	e	(12 cases)	<i>ng</i>	'	95 169 171 178 250
a	e	120 163 172 249	—	'	258
i	e	87 115 152 173 261	<i>s</i>	s	(20 cases)
o	e	247	<i>f</i>	s	90 (cf 96) 169
u	e	87	<i>t</i>	s	170
i	i	(30 cases)	<i>h</i>	s	255
a	i	171 241	<i>t</i>	t	(36 cases)
e	i	165 174 241 254	<i>m</i>	m	(26 cases)
o	i	241	<i>b</i>	m	76
u	i	91 242 251	<i>bw</i>	m	172
o	o	(25 cases)	<i>m</i>	—	102
a	o	96 99 172 244 255	<i>mw</i>	—	107
e	o	88 244	<i>bw</i>	v	50 84 109 242
i	o	87 244 255	<i>w</i>	v	117
u	o	{ 52 58 59 75 160 163	<i>f</i>	v	152
		184 264	<i>b</i>	v	87
u	u	(42 cases)	<i>f</i>	f	(17 cases)
a	u	103 109 110 123	<i>b</i>	f	{ 49 51 83 86 147 148
e	u	179			174 243 246
i	u	105	<i>bw</i>	f	245
o	u	51 83 88 245	<i>kb</i>	f	157
l	l	(26 cases)	<i>b</i>	p	(15 cases)
r	—	(22 cases)	<i>bw</i>	p	179 183 241
n	n	158	<i>f</i>	p	173 176 250
		(18 cases)	<i>m</i>	p	103
ng	ng	{ 83 92 93 94 151 154			
		177 246 264			

Dealing now with so much of the Efaté material as possesses in the Viti a possible bridge across the gap, we construct table B, on the preceding page. The mass of the data under consideration, amounting to 175 entries, is sufficient to establish these results upon

a satisfactory basis. The Efaté material is adjusted to the preceding table of Viti-Proto-Samoan-Samoan. Corroboration is not listed in the case of the more frequent concords or mutations.

The following mutations, which have been observed in the comparison of Viti and Samoan, are not involved in any of the material for which we possess Efaté data: *a-u*, *nd-h*, *dh-k*, *k-t*, *v-ng*, *ng-n*, *mb-v*.

The results of this collation are exhibited in the following table showing to what extent there is an agreement persisting through Efaté-Viti-Samoa, in cases where Viti and Samoa differ to what extent Efaté agrees with Samoa and with Viti respectively, and to what extent it differs from each. The cases of agreeing vowels have been omitted for convenience. The spirants and mutes of the labial series have been omitted because, owing to the absence of one or other from each language, it has proved impracticable to establish a comparison; the items involved in this omission amount to 52.

	Vowels.	Semi-vowels.	Palatals.	Lin-guals.	Labials.	Total.
Throughout.....	—	41	40	46	25	152
With Samoa.....	8	6	3	18	1	36
With Viti.....	8	11	2	3	—	24
With neither.....	43	12	6	8	—	69

We now pass to the consideration of the data involving Efaté and Polynesian which find no bridge in Viti. (Table C, page 40.) These will be found under the items 48-63, 73-120, 147-185, 239-271. Here again, in the possession of 160 items, we have satisfactorily sufficient data for a comparative study.

The results of this collation are displayed in the following table. As before, the spirants and mutes of the labial series have been omitted because comparison is impracticable; *f*, however, being comparable, is included.

	Vowels.	Semi-vowels.	Palatals.	Lin-guals.	Labials.	Total.
Same.....	182	26	30	74	43	355
Different.....	71	23	12	5	15	126

From this material we diagram the relation of Efaté and Samoa to their common parent.

Efaté-Parent-Samoa.

	r-r-l	
	l-l-l	
	tr-r-l	
ng-ng-ng	n-n-n	m-m-m
—	—	
—	s-s-s	
		bw-v-v
		f-f-f
g-g-'	t-d-t	b-b-p
k-k-'	t-t-t	b-p-p

Comparing this with the similar diagram Efaté-Parent-Viti (page 37) we note the following differences:

1. That Samoan ' has to do duty for parent *g* and *k*.
2. That Efaté and Samoan *t* alike are called upon to do duty for parent *d* and *t*.
3. That Samoan *p* does duty for parent *b* and *p*.
4. That Efaté *b* does duty for parent *b* and *p*.
5. That Efaté *bw* does duty for parent *v*.

In yet broader comparison we observe that all but one of these differences is found among the mutes in their three series; that Efaté possesses both sonant and surd of the palatal mutes; that it accords with Samoan in the loss of the sonant lingual mute, and that in the labial mutes it has lost, or has not yet acquired, the surd, while Samoan has lost the sonant.

When we add to this latter item the consideration that Efaté has difficulty in compassing the sonant spirant of this same series and has to render it by the muted semivowel *bw*, we are led to the conclusion that while the Efaté folk have a richer endowment of palatals their lips are not sufficiently under nice control to do justice to the wealth of the Proto-Samoan labials, a determination which naturally arises from inspection of what we may deem a mouthing process in pronunciation. We are, therefore, not at all surprised that in the instances where Efaté is comparable with Viti and Samoan, and they are not in concord, this ruder speech of the western seas agrees with the rougher Viti in 40 per cent of such cases.

We shall next pass to the consideration of the width of these Efaté identifications with Polynesian, and we shall reckon the tale of those that are found only in Nuclear Polynesia, the proximate islands; and those which have reached to the most distant verge of Sawaiori migration. We shall be narrowly particular in specializing geographically the identifications in Nuclear Polynesia, except for a certain important subdivision more general in regard of the classification of identifications in the eastward Polynesia of the later swarming. In each case we treat Nukuoro* as practically Samoa, and the few instances drawn from Polynesian inclusions in Melanesia or islands of the Polynesian verge† we class with Nuclear Polynesia. Furthermore we segregate the data as involving or omitting the Viti, a major subdivision in scope, yet one which more complete scrutiny of distal Polynesia may quite as probably show to be devoid of existence; it is accordingly maintained as no more than provisional.

*17 Journal of the Polynesian Society, 152. †27 Amer. Journal of Philology, 370.

Efaté-Viti-Nuclear Polynesia.

Samoa	65	191	357
Tonga	121		
Nukuoro	348		
Moiki	356		
Samoa-Tonga	70		
Samoa-Futuna	186		
Samoa-Niuē	127		
Futuna-Nukuoro	45		
Samoa-Tonga-Niuē	195		
Samoa-Tonga-Futuna	71	129	221 337
	(and Fotuna)		
Samoa-Tonga-Niuē-Uvea	131		
Samoa-Tonga-Niuē-Futuna	66	135	188 202
	225	341	(and Nu-kuoro)
Samoa-Tonga-Futuna-Uvea	217	(etc.)	220
Samoa-Tonga-Niuē-Futuna-Uvea	136	145	311
Samoa-Tonga-Niuē-Futuna-Uvea-Nukuoro	132	198	200
	(etc.)	209	

Efaté-Nuclear Polynesia.

Samoa	54	60	77	79	84
	102	105	109	115	
	117	119	247	251	
	246	(and Nukuoro)			
Samoa-Tonga	56	85	156	169	
Samoa-Futuna	50	82			
Samoa-Tonga-Niuē	157	93	(and Nu-kuoro)		
Samoa-Tonga-Futuna	52	254	(and Nu-kuoro)		
Samoa-Niuē-Futuna	111				
Samoa-Niuē-Uvea	53				
Tonga-Futuna-Uvea	112	174			
Samoa-Tonga-Niuē-Futuna	57	95	181		
Samoa-Tonga-Niuē-Uvea	270	(and Nukuoro)			
Samoa-Tonga-Futuna-Uvea	62				
Tonga-Niuē-Futuna-Uvea	62				
Tonga-Niuē-Futuna-Uvea	51	255			
Samoa-Tonga-Niuē-Futuna-Uvea	49	91	178		

Combining these two tables, we have noted 69 cases of identifications of words common to Efaté and Nuclear Polynesia and which extend no farther along the track of the migration eastward. As I have been at pains to indicate* that there is a possibility of segregating the residua of the former, or Proto-Samoan, migration and the latter, or Tongafiti, migration in Nuclear Polynesia, it is of the highest interest to note that all but seven of these identifications involve the Samoan, and that no less than eighteen reach Samoa and go no farther.

We shall next take up the tale of Efaté and all Polynesia, distal as well as nuclear, with, however, certain very important data reserved for yet more particular note.

Efaté-Viti-Polynesia.

64	67	68	72	123	125	126	133	134	138	139	141	142	143	146
187	190	192	193	196	201	203	204	206	207	208	210	211	212	213
214	215	216	218	222	223	226	227	228	229	230	231	233	234	235
238	272	273	274	275	276	277	278	279	281	282	283	284	285	286
288	290	291	292	293	294	295	296	297	298	300	301	302	304	305
306	307	308	310	312	313	314	315	317	318	319	320	321	322	323
324	325	326	327	330	331	332	335	336	338	339	340	342	343	344
345	346	347	349	350	351	352	353	354	355	358	359	360	361	362
363	364													

Efaté-Polynesia.

48	58	61	63	73	74	75	76	78	80	81	87	89	90	92
94	101	106	107	118	120	148	149	150	151	152	153	154	158	159
161	162	163	164	166	167	168	171	172	175	177	179	183	184	185
240	241	243	244	245	248	249	253	256	257	258	260	261	263	264
266	267	268	269	271										

From the 188 items of the identification of Efaté material with Polynesia, including the Nuclear Polynesian and the most remote terminus of migration, we have withheld for particular note the following interesting items, which, with others of similar import yet to be developed, call for special comment.

These items are identifications made in Nuclear Polynesia and thence traced, not to distal Polynesia in general, but to particular termini with at least one intervening or intermediary point. We group them as they fall into three classes as southern, eastern and northern swarms.

<i>Southern Swarm:</i>	{ Maori-Mangareva.....	72	120	272(nefu)															
	{ Maori-Tahiti.....	137	155	309	328	180	250												
	{ Maori-Tahiti-Mangareva..	106c	239	74	116	165	147	194	197	219									

(Other intermediate points in several items are Mangaia, Rarotonga, Tongarewa, the Paumotu.)

<i>Eastern Swarm:</i>	{ Tahiti-Mangareva.....	106	232																
	{ Paumotu-Mangareva.....	242																	

<i>Northern Swarm:</i>	{ Hawaii-Mangaia.....	332c																	
	{ Hawaii-Tahiti.....	98	140	160	252														
	{ Hawaii-Tahiti-Paumotu..	316																	

We have next to consider a small but well-marked group of identifications where there is a leap from Efaté to distal Polynesia without having left a trace in Nuclear Polynesia except in so far as that may be held to exist in the instances linked to Viti, these being distinguished by V in the list.

General.....	99	176	V237																
Southern swarm.....	96	97	V136b	V124															
Eastern swarm.....	106a																		
Northern swarm.....	59	88	104	110															

Finally we come to a group where identification has been established in Nuclear Polynesia and in one, and only one, of the peripheral languages. In the same classification and with the same notation they are listed in the following table:

<i>Swarm:</i>																	
Southern..	106b	V122	V130	V144	182	V199	V236	262	V287	V329	V343b						
Eastern...	100	108	113	V139a	170	173	V299	V334									
Northern..	55	V 69	83	86	114	V128	V189	V224	V343a								

In arithmetical summation we find that 324 identifications in this material may be considered quite satisfactorily established as between Efaté and Polynesia. Of these there are 69 words in which the Efaté word is found in Nuclear Polynesia alone, 191 in which it is general to Polynesia, 19 in which it is associated to the northern swarm which has found its ultimate seat in Hawaii, 12 to the eastern swarm, 33 to the southern swarm and a Maori home.

Now what are the deductions which may justly be drawn from these data?

A.

We know from our study of the Samoan record of historical tradition and equally from our comparison of the elements and methods of that language with its congeners in eastward Polynesia that this group of islands, so centrally situated in its relation to the outward islands as is the palm to its outstretching fingers, has been the scene of at least two settlements of Sawaiori stock. To these two periods, culminating in the victory of the earlier colonists in the Matamatamē epoch,* I have assigned the designations of Proto-Samoan and Tongafiti, the one carrying to us its own explanation, the other equally clear to the Samoan as his own name of the enemy who drove him into the mountains, harried him with exactions, and was at last expelled by the semidivine might of his great national hero, Savea, in whom the Malietoa name began.

Our initial problem, therefore, is to deal with the incidence of the now established Polynesian content of Efaté. Is it Proto-Samoan, is it Tongafiti, is it a mixture of both? That is to say, in another form of statement, was it the former swarm out at the gates of the Malay seas, or was it the latter, or was it both which bivouacked in Efaté of the New Hebrides on its way to Samoa? Or, this is a possibility as well, did wind-driven estrays from Samoa obtain a foothold in Efaté in sufficient numbers to fix and clinch these several items upon the Melanesian speech there existing? Was it during the earlier Proto-Samoan period, during the succeeding Tongafiti period, or during the modern Samoan era after Matamatamē, when the language is a mixture of these two in proportions by us as yet undetermined, that such reverse migrations took place?

B.

The last hypothesis, the counter migration westward from Samoa considered as an eddy current of the great eastward sweep of the race, we shall take up first. The drift of such castaways has been known within the historic period. I cite Codrington's† excellent authority upon this point:

From the limits of the Melanesian languages as defined above, the language of the Polynesian settlements in Melanesia has to be withdrawn. The distinction between this and the Melanesian is everywhere plain, and there is very little distinction apparently to be made of dialect in the speech of one settlement and another. These Polynesian outliers are to be found in Uea, one of the Loyalty Islands; in Fate, Sandwich Island; in some islets of the Sheppard Group, and notably in the settlement of Mae in Three Hills; in Tikopia, north of the Banks Islands, and in several of the Swallow Group near Santa Cruz; in Rennel and Bellona, south of the Solomon Islands, and in Ongtong Java, near Ysabel. The language of these is said, on good authority, to be substantially that of Tonga, and

* 27 American Journal of Philology, 371; 30 American Journal of Philology, 171. *

† Melanesian Languages, page 7 *et seq.*

the same throughout; speakers of the Maori of New Zealand can understand it and make themselves understood; it has nothing to do directly with the Melanesian languages.* The existence of these Polynesian settlements, however, in the midst of Melanesia can not fail to suggest questions of interest and importance which it is impossible to dismiss without consideration. As to their origin, it is not difficult to conjecture what it has been. Canoes accidentally drifting or blown away, or expeditions purposely directed to known islands, have landed small parties of Polynesian people either on uninhabited places or on islands occupied by Melanesians. Some at least of such settlements may be supposed comparatively modern. If such islands as Rennel, Bellona, or Tikopia have been reached, remote from any large Melanesian island, the colonists naturally remain purely Polynesian in language, habits, and physical characteristics, for there is no admixture. If a single canoe, or a small male party, has found its way to an inhabited Melanesian island, the Polynesian element has been absorbed, leaving perhaps only some fairer and more straight-haired children as an evidence of mixed blood.† In the case of such a settlement as Mae the case is different. The middle part of that island, one only about six miles long, is occupied by people whose speech is that common to all these Polynesian settlers, but who physically are not distinguishable from their neighbors who are Melanesian both in language and physical character. The same is the case in the Swallow Islands: the inhabitants of islands close together speak either a language like that of Santa Cruz or the Polynesian; but they are all alike Melanesian in appearance. The Tikopians, an isolated Polynesian settlement, are wholly unlike Melanesians—tall, heavy, light-colored men, with straight hair. The reason why the Polynesian-speaking people of Mae, for example, are Melanesian in appearance clearly is that the Melanesian blood in them has overborne the Polynesian element; that is to say, the Polynesian settlers have, generation after generation, taken Melanesian wives into their villages in which the speech was Polynesian. The speech, the descent of chiefs, certain religious practices, have remained Polynesian, the physical aspect has gradually lost its original character. Under such circumstances the speech which will be permanent is the speech of the settlement; the physical character that will prevail will be that of the blood. Hence the Tikopian is physically and in language purely Polynesian, the Fileni man of the Swallow Group is in speech Polynesian but physically Melanesian. The phenomena of the case are thus explained.‡

*Some few years ago a whaler picked up in the Solomon Islands and brought down to Norfolk Island some natives of Mae and Fate, survivors of a crew massacred in Ongtong Java. They belonged to the Polynesian settlements, and they told me that they, the Mae and Fate men, spoke the same language, and also understood that of the Ongtong Java people.—Dr. Codrington's note.

†I have seen myself in Ureparapara a man and woman with a son, drifted thither from some Polynesian island; and I have noticed straight-haired children in Saddle Island who were known to be descendants of Polynesian castaways.—Dr. Codrington's note.

‡Some fifty years ago the Banks Islands were visited in two successive years by double canoes. The people in those canoes said they came from Tonga. They settled the first year for a time on the islet of Qakea, close to Vanua Lava, quarrelled after a time with their neighbors, and went off. When they returned next year they were attacked by the natives and driven off. There were women with them. If they had settled on Qakea there would be there now a Polynesian-speaking people, but Melanesian wives from Vanua Lava would be continually bringing in Melanesian physical characteristics. If Qakea had been an isolated place like Tikopia, there would have been then a small purely Polynesian colony.—Dr. Codrington's note.

It remains to state another remarkable fact. In Three Hills Island, Mae, the Polynesian settlement above mentioned is about two miles distant from Sesake, at one end of the island, occupied by those who may be called the aborigines. The Mae language is Polynesian, if not purely, at least decidedly so; the Sesake language is Melanesian decidedly, and at any rate has nothing that makes it appear more influenced by its Polynesian neighbor than if Sesake and Mae were in different and distant islands. This can not be too positively stated, and the importance of the fact is very great. It is an exemplification, in a very narrow field, of what is also found to be the case with regard to Fiji. The Fijian group is only some 200 miles west of the Friendly Islands, which are decidedly part of Polynesia. There has been a considerable intercourse between the two groups, and no doubt a great infusion of Tongan, Friendly Islands, blood among the higher classes of Fijians. There has been also, according to native legends, a considerable intercourse between Fiji and the purely Polynesian Samoa. Yet the Fiji language is most decidedly Melanesian; it has no doubt something directly derived from Tonga, but it is no more Polynesian than the languages of the Banks Islands, which lie far away to the west, out of reach of any but the most casual and insignificant intercourse with Tongans or other Polynesians. Intercourse, therefore, and close neighborhood with Polynesians do not, as a matter of fact, materially affect the language of Melanesians.

Yet Efaté has had its Polynesian content sufficiently long to subject it to a course of modification,* and this is not the work of a day or of a generation. We are, therefore, to lay aside the possibility that this accretion is due to westward drift in the modern epoch; furthermore we are yet without information on the extent to which modern Samoan is the result of the admixture of the speech of the earlier and of the later migrants.

It is equally impossible that the Polynesian accretion came to Efaté during the Tongafiti domination of the littoral of western Samoa. We have segregated in this Polynesian content a considerable proportion of words which, *qua* Polynesian, are the exclusive possession of Nuclear Polynesia. It is absurd to hold it possible that Tongafiti migrants should have acquired these words from the Proto-Samoans with sufficient grip to carry them on a voyage against the current of their race and to impress them on an alien and resistant people, yet with entirely too feeble a hold to carry them along the current of their further and easy migration eastward.

The data here collected must stand as proof positive that if the Polynesian content of Efaté is due to a westward drift from Nuclear Polynesia that acquisition must have been in the Proto-Samoan period, a period which we must consider to have ended with the Tongafiti swarming, the epoch of the great voyages, and that was somewhere about 1,200 of our era. Against this possibility of west-

*This is shown in examination of the data *passim* in this collection, and particularly as regards a specific detail of such modification in my paper on Duplication by Dissimilation, 30 American Journal of Philology, 171.

ward drift our comparison of the Polynesian of Efaté with that of Nuclear Polynesia gives us warrant to say that it is highly improbable that Efaté received its Polynesian from the east; it gives us no warrant to say that it is impossible.

C.

It may be difficult and it may remain difficult to prove that the Polynesian in Melanesia did not come there from Sawaiori settlements in the central and eastern Pacific; the proof of a negative by no means loses any of its logical difficulties when stated in terms of an unlettered people. But there is all the proof that consistent tradition can give to the migration theory which introduces the Melanesian chain as the line along which the migrant fleets passed from the known sojourn in Indonesia to the known occupation of Polynesia. The presence of so large a share of Sawaiori vocables in Efaté does not in itself prove that this island lay on the fairway from Indonesia to Savai'i, but it is hugely confirmatory of all other evidence upon which this theory is based. We are here really not so much concerned with the proof of this migration theory as we are with the determination of which swarm it was that included Efaté in its voyaging.

In the Proto-Samoan we have a distinct, and surely an early, phase of Sawaiori speech which differs from the Tongafiti in the possession of certain vocables which the latter has not—in the absence of certain vocables which the latter has preserved or has acquired since the separation of the two stems. Above all else the Proto-Samoan is distinguished from the Tongafiti by its maintaining superficially, or recoverable under the surface by the merest scratching, the remnants of the original speech in which closed syllables were possible.

Everywhere in this Polynesian of Efaté we find the closed syllables of the Proto-Samoan, not the Tongafiti softening away of the final consonant. This is so common that it has not seemed necessary to collate for this feature, it has been sufficient to insert the Proto-Samoan radical in each item of the collected data where it has been possible to recover it. On this score we have no hesitation in associating the Polynesian content of Efaté with the Proto-Samoan.

In consideration of the vocabulary we are dealing with 324 items. Of these there are but 12 which are not identified in Nuclear Polynesia; if we include Viti in Nuclear Polynesia, as seems quite justifiable, we shall reduce the reckoning to 9. Now 9 in 324 is readily explicable by the known habit of Polynesians to cast out certain words under the manifold working of their tabu.* Against these 9 is to be set the fact that of our 324 identifications 20 per

*See note 255.

cent, 1 in every 5, 69 words in all, are common to Efaté and Nuclear Polynesia and are not to be found in the languages deriving from the Tongafiti or cadet branch of the family; that in the close subdivision of the Nuclear Polynesian 18 words of these 69 are to be found in Samoa alone, and that only 7 in all fail of Samoan identification, and even of these 7 there are 2 which might readily be identified in Samoan. The conclusion is irresistible that the Polynesian content of Efaté is Proto-Samoan.

Assuming the validity of the migration down along the Melanesian chain from Indonesia to the Pacific we have no hesitation in declaring as proved that the Proto-Samoan swarm had to do with Efaté and that the Tongafiti swarm did not touch there. I have used discretely the term "had to do" in reference to this transaction, for we are without data upon which to base a more definite determination. The main body of the Proto-Samoans may have rested upon Efaté through such a lapse of time as to impress their better speech upon the ruder autochthons, or a considerable unit of the swarm may have deviated from the voyage and have colonized the island. In either case the physical results of such commingling are not apparent.

D.

We now come to the last items in the tabular grouping of the data, the eastward extension of this material which we now know to be Proto-Samoan and its discovery in territory now occupied by Tongafiti descendants. We shall here touch upon it very lightly, for it does not bear upon the proof as relating to Efaté. We are not to assume that the swarming impulse which set the Proto-Samoans in motion from ancestral Hawaiki (whether that be in the Hindu-Kush or in the Hadramaut), which drove them into and out of Indonesia, which pushed them through Efaté and into Nuclear Polynesia—we have no reason to assume that this quest of the sunrise deserted them when they reached the green hills and the gray sands of Samoa. We read their stories but blindly if we miss the departure of hardy voyagers in search of sea and sea and haply land beyond. Until the Tongafiti came and drove them from the coasts the sea was theirs for voyaging. In these memoranda we think we find record of the ports some of them made.

There is confirmation peripheral as well. Hawaii has record* of voyages from Samoa direct, and in New Zealand† there is a similar tale. The Samoans say that their ancestors started on voyages from Samoa, the Hawaiians and the Maori record that voyagers from Samoa arrived. Here in the philological record we seem to have the

*2 Fornander "Polynesian Race," 33.

†S. Percy Smith in litt.

proof as convincing as in our civilized estate would be the production of clearance and entry duly attested by tidewaiter and collector of the port.

We are now brought to a point at which it will be advantageous to offer a check-list of the mutations in the Polynesian material contained in the fundamental data of this work. The standard upon which the comparison is based is the Proto-Samoan, the earlier phase which with as much certainty as ease we may recover from the current Samoan. The figures refer to the data items as presented in the appendix, pp. 185-431. The figures included within parentheses indicate that in the vocables thus designated the mutation appears to run concurrently through two or more languages. The point is important and worthy of some note, for it is quite possible that the word stem may of its own constitution carry the mutation into a speech whereto the mutation itself is not normal. To find an excellent instance of this we need look no further than the first subdivision hereunder, the *a-e* mutation in *fanua* (292) land, which we find to persist through no less than ten of the eighteen languages involved, yet which is the only instance of this mutation in Maori which our material affords. To the identifying numerals the diacritical mark of the acute accent has been added when the mutant vowel bears the accent in Samoan or in the speech under examination. This distinction will be found of value in all the languages which retain the penult accent (except where otherwise indicated in the text) normal to Polynesian speech. The Maori, it will be recalled by those familiar with these tongues, has broken away from the Polynesian rule and has devised an accent system of its own. Similarly the degree mark is used to denote the cases in which the mutation occurs in an unaccented final syllable.

a-e (170, 216, 253, 290, 292, 350)

Bukabuka . . . 216, 292
 Fakaifo . . . 292
 Futuna . . . 170'
 Hawaii . . . 166, 253'
 Manahiki . . . 292
 Mangareva . . 154, 253', 292, 350
 Maori 292
 Marquesas . . 80, 89, 193, 258, 274,
 275^a, 290, 292, 322
 Moiki 292

Mori 73
 Niuê 147, 397', 350
 Nukuoro . . . 290
 Rarotonga . . 216
 Rotumâ . . . 360°
 Sikayana . . . 292
 Tahiti 183°, 216, 292
 Tonga 170', 290, 350
 Uvea 148', 292
 Viti 164°, 188'

a-i

Mori 350
 Niuê 290

Tahiti 216
 Viti 139b°

a-o (216, 271, 292)

Hawaii 193, 292
 Marquesas . . 75, 163, 216
 Mori 214°
 Niuê 93', 216, 292
 Rotumâ . . . 239', 290, 291', 294', 328',
 351, 352'

Tonga 92, 107, 167, 216, 271°, 277, 292
 Uvea 271°

a-u (144, 167, 185)	
Fotuna.....144', 281'	Marquesas...185°
Futuna.....167	Niuē.....167, 248
Hawaii.....167	Tahiti.....167, 185°
Mangareva...167	Uvea.....167
Maori.....167, 185°	Viti.....144, 202'°
a-au	
Fotuna.....45°	
e-a (47)	
Bukabuka...327	Niuē.....127°
Futuna.....47'	Rotumā....290°
Hawaii.....210'	Viti.....47', 126, 272'
e-i	
Aniwa.....249°	Rotumā....153'
Fotuna.....315°, 247°, 363°	Viti.....64°, 173
e-o (126)	
Hawaii.....126	Mangareva...126
Moriori.....126	Marquesas...126
Rotumā....122', 272'	
e-u	
Rarotonga...257'	
i-a	
Fotuna.....286°	
i-e	
Maori.....332' f,	Rotumā....352°
Nukuoro....304'	
i-ei	
Aniwa.....300'	Fotuna....298', 300', 321', 362'
(This occurs in but these two islands of the verge and appears to be only initial.)	
i-u ₂ (305)	
Nukuoro....166'	Uvea.....286'
Sikayana...321'	Rotumā....305'
Tonga.....53'	Viti.....305'
o-a	
Moriori.....287	Tonga.....52'
Rarotonga...257°	Tongarewa...147°
o-e	
Rarotonga...205'	
o-i	
Viti.....248°	
o-u (92, 314)	
Futuna.....92	Paumotu...314
Hawaii.....314'	Sikayana...192'
Mangareva...314'	Tonga.....92
Maori.....314'	Uvea.....92
Niuē.....92	
o-ui	
Hawaii.....139b'	
u-a	
Fotuna.....76', 343° c	Viti.....155°
Hawaii.....277'	
u-i	
Mangaia....168°	Tahiti.....139, 216', 285'
Niuē.....271	
u-o (129)	
Fotuna.....129', 328°	Sikayana...261'
Maori.....361	Viti.....129', 138°, 194, 288'
Nukuoro....139°	
u-au	
Fotuna.....151	
u-ia	
Tahiti.....347	

u-ou

Aniwa 151

ae-e

Niuē 261', 315', 347'

ai-ei

Maori 268

au-a

Mangareva . . 61'

au-ou (61, 200, 335)

Aniwa 200', 267', 301'

Mangareva . . 161', 162', 226', 335'

Maori 283'

Marquesas . . 335'

Niuē 61', 200'

Nukuoro . . . 200'

Tonga 61', 200', 335'

Uvea 61'

ei-i

Tonga 78'

ou-au

Fotuna 282'

ng-n (note 125)

Hawaii

Marquesas (western dialect)

Rotumā . . . 285°

Sikayana

ng-k

Marquesas (eastern dialect)

Viti 332'*b***ng-ngg**

Viti 248'

ng-v

Viti 154°

ng—

Maori 310°

Marquesas . . 151'

Niuē 93'

Tahiti

Uvea 69°

k-g

Paumotu . . . 306'

k-ng

Mangareva . . 67, 214

Uvea 178

Viti 135

k-ngg

Viti 188, 191, 202, 224

k-t

Niuē 250

k—

Hawaii

Marquesas . . 204, 261

Niuē 57

Nukuoro . . . 300

Paumotu . . . 248

Rotumā . . . 300, 305

Tahiti

Tonga 181

Samoa

l-n

Hawaii 154

Nukuoro . . . 100, 200, 297, 309, 310, 350

Tahiti 100, 154

Tonga 312, 313

Uvea 312, 313

l-ng

Moiki

l-f

Rotumā . . . 354

l-t

Mangareva . . 257

l-nd

Viti 287

l-ndr

Viti 272, 307, 314, 334, 335

l—	Hawaii.....257	Tahiti.....281
	Marquesas	Nukuoro....349
	Niuē.....200, 230, 244, 301, 322, 327, 336	Tonga.....244, 327, 356
		Uvea.....301
n-l	Nukuoro....296	Samoa.....296
n-r	Rotumā....328	Tahiti.....328
n-ng	Moriori	Viti.....342
h-h	Niuē.....47, 81, 206, 278	Uvea.....47, 295, 331
	Tonga	
h-s	Rotumā....206, 278, 340	Viti.....206, 331, 339
h-th	Viti.....47, 72, 215, 274, 278, 352	
h-w	Hawaii....295	
s-f	Futuna....239	
s-h	Hawaii	Paumotu
	Mangareva	Tahiti
	Maori	Tonga
	Marquesas	Tongarewa
	Niuē.....91, 98	
s-(s, h)	Manahiki	Tonga
	Nukuoro	Uvea
s-sh	Moiki	
s-ndr	Viti.....232	
s-th	Viti.....65, 91, 143, 198, 233, 298, 337, 338, 340, 341, 344	
s—	Hawaii....245	Marquesas..239
	Mangaia....204, 205	Rarotonga
	Mangareva	Tahiti.....90, 140, 239
	Maori.....239	
t-j (ch, tsh)	Aniwa.....166, 329	Fotuna.....133, 165, 219, 329, 355
	Fila.....166, 329	Tonga
t-f	Rotumā....294, 324, 350	
t-k	Hawaii	Tonga.....355
	Mangareva..141b	Liueniua....350
	Paumotu...216, 237	
t-s	Futuna.....332b	Uvea.....165, 196, 219, 325
	Rotumā....352	Viti.....238
t-nd	Viti.....141a, 208, 329, 350, 353	
t-th	Rotumā....294	Viti.....141b
t—	Marquesas..350	

- m-ng**
Maori 313
- v-h**
Niuē 281
Nukuoro . . . 296
- v-w**
Hawaii
Maori
- f-h**
Aniwa 259, 329, 360
Hawaii
Manahiki . . . 201, 259, 290, 292
Mangareva
Maori
- f-p**
Futuna 86
- f-v**
Bukabuka . . 290
Fotuna 166, 329
Manahiki . . . 290
Mangareva . . 290, 293
Marquesas . . 290
- f-w**
Hawaii 290
- f-hw**
Bukabuka . . 292
Maori 122, 130, 133, 147, 148, 166,
170, 213, 214, 223, 243, 273,
283, 292, 293, 294
- f-b**
Tonga 86
- f-mb**
Viti 273^a
- f-tch**
Sikayana . . . 259
- f—**
Bukabuka
Mangaia
Nukuoro . . . 290
Mangareva . . 92, 147, 148, 213, 214, 272,
290, 292, 294
- p-b**
Rotumā 285
Fotuna 192, 286
- p-mb**
Viti 64, 125, 128, 173, 190, 192
- p-h**
Rotumā 284
- p-v**
Viti 103, 284, 286
- Viti 313
- Rotumā . . . 122
- Viti
Fotuna . . . 281
- Marquesas . . 130, 133, 166, 292, 293, 296
Moiki 201, 206, 215, 273^b, 329
Moriōri 214, 272
Niuē 137
Tongarewa
- Uvea 86
- Paumotu . . . 290
Tahiti 290
Uvea 314
Viti
- Maori 290
- Moriōri 287, 293
- Fila 329
- Rarotonga
Rotumā 206, 214, 290
Tubuai 290
- Sikayana . . . 285
Tonga 52, 128

CHAPTER VII.

POLYNESIAN RELICS IN MELANESIA.

Check-list of the material for this section of the work—Tables of the phonetic relations of 81 languages of the Melanesian archipelagoes—The several mutations of vowels and consonants and the languages which employ them—Analysis of these mutations, those which are found in Polynesian and those confined to Melanesia—The ground-work of Polynesian mutation and the Melanesian system compared therewith—Two Melanesian foci of Polynesian influence brought to light—The sieve theory disproved by this material—Proof of the general migration theory—Crop colonies and the important part they play—Two tracks of Proto-Samoan migration through Melanesia—Proof that a Melanesian sojourn preceded the settlement of Samoa.

In an earlier chapter I have written that in accordance with Dr. Macdonald's theory of his Oceanic language equal weight should attach to the identification of Efaté-Polynesia and Efaté-Melanesia. The former we have just had under rigorous review and we have been led to certain conclusions. We are now to examine the Melanesian material in its turn.

This is distributed irregularly through the collected data, the distribution being based upon the tabulation of the Efaté words in several series. To facilitate reference to the material of each of these languages the following catalogue will be found of service.

Alite. . . .	217	239	250	251	259	265	275	278	285	291	300	301	306	309
	313	317	330	337	350	351	352	356	360	361				
Alo Teqel		122	123	147	190	193	214	217	239	250	251	272	275	278
	294	300	301	306	307	309	316	317	318	324	328	333	335	337
	343	350	360	361										
Ambrym	46	147	194	212	215	239	242	252	258	265	266	274	278	284
	287	290	291	297	298	300	305	312	318	324	329	336	350	352
	356	357	360	361										
Aneityum		124	126	147	149	154	168	173	188	191	194	198	204	205
	206	207	214	216	217	228	229	240	241	256	258	260	262	264
	265	266	268	269	270	271	273	274	278	279	282	283	285	288
	291	293	294	298	301	306	307	309	310	312	313	315	316	317
	318	319	320	321	322	323	324	326	328	329	335	337	339	340
	342	344	347	349	350	360	361							
Arag. . . .	122	149	152	153	160	190	193	209	212	214	215	217	239	250
	258	259	265	272	275	278	284	285	290	291	292	294	300	301
	306	307	309	312	313	317	318	324	328	329	330	333	335	336
	352	356	357	360	361									
Baki. . . .	147	149	156	182	190	194	199	208	210	211	217	228	237	240
	247	254	258	263	273	278	282	285	290	291	292	297	298	305
	308	309	312	313	315	317	320	321	324	336	340	344	346	347
	350	352	356	358	359	361	362	364						
Baravon.	74	122	147	149	156	190	207	214	215	217	257	270	273	280
	284	285	290	291	294	300	313	319	320	323	324	327	329	336
	346	358	360	361										
Bauro. . .	47													

Belaga . .	46	147	152	203	207	211	258	284	285	290	300	317	338	339
	342	343	346	352										
Bierian . .	148	156	199	207	210	216	217	240	252	256	258	259	260	263
	270	278	282	285	290	291	292	293	294	297	298	300	301	302
	305	308	309	311	312	313	315	317	318	320	321	322	323	324
	329	336	340	344	350	352	356	358	361	364				
Bougainville		149	192	259	265	278	350							
Brierly Island		190	294	317	324	340	347	361						
Brumer Island		298	324	344										
Bugotu . .	122	147	213	214	217	239	251	257	272	275	278	284	285	290
	291	298	301	305	306	309	312	313	316	317	322	328	329	330
	338	339	343	346	351	352	361							
Buka	46	149	158	190	207	217	239	247	257	259	265	278	280	285
	298	300	306	308	313	318	324	328	330	343	344	350	352	355
	360	361	363											
Bululaha	190	217	239	250	251	259	265	291	298	300	301	306	309	317
	329	330	350	351	352	356	360	361						
Deni	194	212	214	265	266	278	285	306	307	324	335	339	358	360
	361													
Dufaure Island		167	340											
Duke of York		46	74	122	147	149	164	169	207	214	217	265	269	272
	275	285	290	292	294	300	301	309	312	313	314	316	318	319
	320	321	324	325	327	328	329	332	335	336	343	350	352 ^b	358
	360	361												
Epi	39	44	47	75	77	186	200	202	212	265	286	330	343	363
Eromanga		194	206	217	218	240	265	270	273	274	278	282	285	290
	291	294	305	312	317	324	329	333	337	338	349	350	352	360
	361													
Fagani . .	122	147	149	190	214	217	239	250	251	257	258	259	265	272
	273	278	285	290	292	294	298	300	307	309	312	313	316	317
	318	324	328	329	330	342	350	351	352	356	357	358	360	361
Gog	46	122	123	147	149	151	154	190	203	206	214	217	239	251
	268	272	275	278	284	285	298	300	301	306	307	309	312	313
	317	318	322	324	328	333	335	336	338	339	342	343	356	357
	358	360	361											
Guadalcanar		149	272	278	285	298	309	328	335					
Iai	194	259	265	294	318	324								
Kabadi . .	46	74	265	266	292	330	361							
Kabakada		122	147	214	285	320	327							
Kalil	294	296	312	322	329	352								
King	47	74	147	151	196	213	217	247	258	264	266	280	294	296
	309	312	313	318	319	320	321	323	324	329	336	342	343	344
	349	350	352	358	361	363								
Lakon . . .	122	123	147	149	190	193	206	214	217	239	251	265	272	275
	278	284	285	292	301	306	309	312	313	317	318	324	328	333
	335	337	343	350	351	356	360	361						
Iamassa . .	47	74	151	190	213	216	247	265	266	280	285	292	294	296
	309	312	313	316	317	318	319	324	329	342	343	344	350	358
	361	363												
Lambell . .	47	74	147	149	151	190	196	213	216	247	264	265	266	280
	292	294	296	309	312	316	317	318	319	320	324	329	336	342
	343	344	346	350	352	358	361							
Laur	47	151	156	190	216	217	247	257	265	266	277	292	294	295
	296	309	312	313	315	316	317	318	319	324	329	333	343	344
	350	352	361	363										
Lemaroro		258	274											
Leon	46	122	147	149	187	193	203	214	265	292	307	318	337	
Lifu	214	259	265	318	324	326	330	333	361					
Lo	46	122	147	149	152	169	190	193	195	212	214	217	239	251
	265	266	272	275	278	285	290	291	300	301	305	306	307	309
	312	313	316	317	318	321	324	328	333	335	336	339	343	350
	351	356	357	358	360	361								
Maewo . . .	46	122	147	149	152	153	190	193	203	206	212	214	215	239
	259	264	266	272	275	278	284	285	291	292	298	301	306	309
	312	313	316	317	318	324	328	329	333	335	336	337	346	352
	357	358	360	361										
Mai	281													

Makura..	74	165	265	273	290	297	302	306	309	312	317	321	333	335
	352													
Malanta..	312	324												
Malekula..	43	47	74	77	121	147	148	156	157	161	193	194	199	208
	210	211	217	227	228	239	242	246	247	251	252	254	258	259
	270	274	276	278	282	285	287	289	291	292	294	297	300	301
	302	306	309	312	315	316	317	318	319	320	321	323	324	328
	329	335	339	340	344	345	346	347	350	351	352	356	358	359
	360	362	363	364										
Malo....	44	47	121	124	147	148	190	193	194	199	203	206	207	208
	217	218	228	239	247	252	254	258	266	270	282	285	289	290
	292	293	297	301	302	305	306	308	309	311	312	313	316	318
	319	320	321	324	328	333	335	336	337	338	339	340	343	344
	346	347	351	352	353	354	356	358	359	361	362			
Marina..	39	46	147	193	212	214	250	272	275	278	284	285	291	292
	301	306	309	311	312	313	317	318	321	324	328	333	335	336
	343	350	352	356	357	358	360	361						
Matupit..	74	147	214	244	280	285	287	300	320	346	347	352	358	
Meli.....	147													
Merlav..	46	122	123	147	149	151	154	190	193	197	206	207	210	214
	217	239	251	265	268	275	278	284	289	291	300	301	306	307
	309	312	313	316	317	318	322	324	328	333	335	337	338	339
	342	357	358	360	361									
Moanus..	74	126	190	215	239	265	284	285	290	291	294	305	308	312
	317	324	328	329	330	335	345	350	352	360	361			
Mosin...	122	123	147	154	193	214	217	239	251	265	272	275	278	284
	300	301	306	307	309	312	316	317	318	324	328	333	335	336
	339	343	356	357	360	361								
Mota....	46	47	75	122	123	147	151	152	153	154	156	160	163	167
	169	189	190	192	193	196	197	198	199	203	205	206	207	209
	212	213	214	215	216	217	223	227	228	230	237	239	240	241
	243	247	248	250	251	252	253	254	257	258	259	262	263	265
	266	267	268	269	272	274	275	276	278	279	280	283	284	285
	286	287	289	290	291	292	294	295	297	298	300	301	302	306
	307	309	310	312	313	316	317	318	319	320	321	322	323	324
	325	326	328	331	332	333	335	336	337	338	339	340	341	342
	343	344	346	347	348	351	352	353	355	356	357	358	359	360
	361	362	363	364										
Motlav..	122	123	147	149	151	154	169	190	193	214	217	239	251	258
	259	265	272	275	284	285	290	291	292	300	301	306	307	309
	312	316	317	318	321	322	324	328	333	335	336	337	339	346
	350	351	356	360	361									
Motu....	42	44	47	76	125	158	168	182	190	201	205	208	214	217
	241	243	248	249	265	268	271	272	273	282	285	288	292	293
	298	299	301	304	306	309	310	312	313	317	318	319	321	326
	327	328	330	331	332	333	334	335	539	342	343	346	347	349
	350	351	352	354	358	359	360	361	362	363	364	365		
Murray Island	275	301	305	309	361									
Natalava	335	350	361											
Nengone	122	214	245	265	274	291	300	306	309	322	330	333	335	361
New Britain	46	76	125	149	152	154	167	190	200	207	214	217	267	
	275	289	290	297	306	309	313	318	319	320	322	323	324	326
	327	336	343	345	352	360								
New Caledonia	273	330	333											
New Georgia	149	190	192	217	285	298	300	301	305	312	313	324	350	
	351	361												
New Guinea	217	265	273	276	290	324	330	334	346	350	365			
New Ireland	247	273	278	290	296	300	312	313	317	318	324	329	344	
	350	351	361	363	365									
Nggao...	201	214	215	217	239	251	272	278	285	298	301	305	309	312
	313	324	336	346	351	352	361							
Nggela..	45	46	122	147	149	152	155	190	197	198	203	207	208	213
	214	216	217	239	251	258	259	272	273	278	284	285	290	291
	292	294	296	297	298	300	301	305	306	309	312	313	315	316
	317	318	321	322	323	324	327	328	329	330	332	335	338	339
	342	344	346	350	351	352	357	358	360	361				

Nguna...	46	74	75	159	206	214	240	261	266	294	301	317	318	321
	336	338	346	350										
Nifilole...	149	212	214	217	239	284	290	291	294	313	328	330	357	360
	361													
Norbarbar	75	122	147	149	190	193	212	214	217	239	251	265	272	
	278	285	289	291	292	300	301	306	307	309	312	316	317	318
	324	328	331	333	335	336	337	338	344	350	356	357	358	360
	361													
Omba...	42	74	122	147	149	152	153	169	190	206	207	212	214	217
	239	254	275	278	284	285	290	291	292	295	300	301	306	307
	309	312	313	317	318	324	333	335	336	338	346	352	356	358
	360	361												
Paama...	252	274	312	329										
Pak.....	122	123	147	149	190	193	203	214	217	239	250	251	265	270
	272	275	278	292	300	301	306	307	309	312	316	317	318	324
	328	333	335	337	339	350	356	357	360	361				
Raluana...	214	294	314	336	358									
Retan...	46	122	123	149	193	292	312	317	318	331	336	344	357	358
Ruavatu...	313	317	361											
Saa.....	122	187	190	200	214	217	250	251	259	265	266	273	291	292
	294	298	300	307	309	313	317	318	329	330	338	339	350	351
	352	356	358	360	361									
Santo...	47	153	199	206	216	217	228	239	253	255	278	285	292	300
	302	305	312	313	316	318	324	336	343	346	352	355	356	
Sasar....	46	123	147	190	193	217	239	250	251	272	275	278	292	301
	306	307	309	316	317	318	328	333	335	337	343	350	356	360
	361													
Savo....	190	214	239	250	251	272	275	285	305	316	328	337	361	
Sesake..	39	40	45	46	147	149	151	153	158	162	169	194	200	203
	206	209	212	214	215	217	239	246	251	257	258	260	270	272
	274	278	285	291	292	294	296	298	300	301	305	307	310	312
	317	318	322	329	330	333	335	336	337	338	339	342	350	352
	356	357	358	360	361									
Solomon Islands		190	243	276	290	291	294	297	301	304	309	312	318	
	324	330	361	363										
Tangoan Santo	41	147	148	193	194	206	209	217	239	247	265	278	301	
	302	313	316	328	333	338	340	346	358					
Tanna...	147	150	168	173	190	194	200	207	216	217	218	238	240	247
	256	251	258	266	273	274	285	290	291	293	306	308	312	313
	317	319	321	322	324	328	333	334	337	340	350	352	358	360
	361	363												
Treasury Island		265												
Uea.....	265	274	290											
Ugi.....	214	250	259	265	292	300	317	318	357	361				
Ulawa...	122	190	200	214	217	239	250	251	259	265	291	294	298	300
	301	309	312	313	317	318	324	329	330	343	350	351	352	356
	360	361												
Vanikoro		273	292											
Vanua Lava		291	292	317										
Vaturanga		122	123	147	190	200	201	206	214	215	217	251	257	258
	259	272	278	284	285	294	298	301	305	306	309	313	316	317
	318	324	328	329	330	335	336	338	346	352	358	360		
Volow...	122	147	149	151	154	190	212	214	217	239	251	265	268	275
	278	284	285	290	291	294	300	301	306	307	309	312	316	317
	318	322	324	328	333	335	336	337	338	339	350	351	357	358
	360	361												
Vuras...	46	122	123	147	149	214	217	239	251	278	284	285	292	301
	306	307	309	312	316	317	318	324	328	333	335	336	339	343
	346	356	357	358	360	361								
Wango...	122	149	190	214	215	217	239	250	251	257	259	265	273	278
	284	298	300	305	307	309	312	313	317	318	328	329	330	335
	337	339	342	344	348	350	351	352	356	357	358	360	361	

We shall next take up in a series of tables the relations of Melanesian tongues with the Proto-Samoan (uniformly exhibited in bold-face type), the data upon which each of these mutations rests, and certain other results which have a bearing on our study. These tables are prepared for all the Melanesian languages for which a sufficiency of data is available. Several of the groups in the preceding catalogue, while seeming to be well enough equipped with examples, have not been included in this tabular review for the reason that earlier compilers, to whose efforts we owe these data, have not been precise in identifying the language. Such omitted collections are to be seen under the headings of New Guinea, New Britain, New Ireland, large lands in which are many distinct languages.

Prefixed to each of these tables will be found two particular notes. The figure following the note Polynesia expresses the number of words in the available material in each language which are identified as of Polynesian stock. The note of Quality is a valuable index which will be explained and discussed at length after the preliminary matter has been arranged.

The final notes in each table call for slight explanation. Under the note *Identical* are assembled those words in which the Melanesian is the same in consonant and vowel structure as either the Proto-Samoan or the modern Samoan, or where the vowel change is so slight as to be explained by the difference in the system of reducing the language to our alphabet by those missionary collectors whose zeal must serve as the excuse for their lack of skill. The second note refers to those words, otherwise identical, which have lost their ending by abrasion. Under *Consonant Identity* are listed those words of identical consonant skeleton where the vowels have undergone change, and the converse is the case under *Vowel Identity*. In the next pair of notes we record those cases where the consonant skeleton has undergone a mutation, but where the vowels remain constant or terminal abrasion has taken place.

ALITE.

POLYNESIAN 21
QUALITY 57

				a a					
			i i	e		o o		u u	
					l l				
ng ng					n l			m m	
					h s, t				
					s s, t, —				
								v ku	
								f v	
								p b	
			k —, ng		t m, —				
a-a	217, 239, 250, 278, 291, 300,	h-s	352						
	309, 313, 317, 337, 350, 360	h-t	278						
i-i	259, 285, 291, 300, 313, 330,	s-s	239						
	350	s-t	337						
o-o	259, 285, 309	s—	251						
u-u	239, 278, 306, 317, 330, 360	t-m	217						
l-l	309, 313, 350	t—	306, 350, 352						
ng-ng	285, 309, 350	m-m	217, 313, 317						
k—	300, 301, 306	v-ku	291						
k-ng	251	f-v	259, 360						
n-l	259, 317, 330	p-b	250, 285						

Identical 300, 309, 313

Vowel identity 217, 300, 317, 330

Consonant mutation:

Vowel identity 259, 278, 285, 350, 360

Terminal abrasion 306

Frontal abrasion 250, 301, 306, 350, 352

Frontal accretion 239, 291

ALO TEQEL.

POLYNESIAN 26
QUALITY 19

		a	<i>a, e, o, u</i>	
		e	<i>e, u o e</i>	
	i	<i>e</i>		u <i>u, e, i</i>
		l	<i>l, t, ng</i>	
ng	<i>ng, n</i>	n	<i>n, t</i>	m <i>m, ng</i>
		h		
		s	<i>s</i>	
				v <i>w</i>
				f <i>v, w</i>
k	<i>g, w</i>	t	<i>t, m, —</i>	p <i>p</i>

a-a	123, 147, 214, 217, 250, 309, 318	ng-n	350
a-e	294, 324, 337, 350	k-g	250, 251, 300, 301
a-o	239, 307, 317, 328	k-w	306
a-u	250, 307, 316	n-n	147, 317, 343, 350
e-e	122, 190	n-t	328
e-u	272	s-s	239, 251, 272, 337
i-e	300	t—	294, 306, 318, 324
o-e	123	t-t	350
u-u	272, 306, 316	t-m	217
u-e	294	m-m	217, 316, 317, 318, 324, 328
u-i	343	m-ng	316
l-l	123, 307, 309, 350	v-w	307
l-ng	123	f-v	122, 147, 214, 294
l-t	335	f-w	272, 360
ng-ng	309	p-p	190, 250

Identical (terminally

abraded) 190, 309

Consonant identity 317, 337

Consonant mutation:

Vowel identity 147

Terminal abrasion 147, 190, 214, 217, 239, 300, 306, 317, 318, 328

Frontal accretion 301

Terminal accretion 122, 324, 335, 350, 360

AMBRYM.

POLYNESIAN 27
QUALITY 44

	a	a, e, i, u	
	e	a o, u	
i	i	u, a, i, o	
	l	l, r	
ng	ng	n n	m m
	h	h, —	
	s	h	
		v f, w	
		f v, b, h	
k	k, g, h,—	t t, s, dr	p —

a-a	147, 215, 258, 284, 300, 318, 324	k-k	194, 300
a-e	239, 258, 324, 352	k-g	297
a-i	290, 350	k-h	258
a-u	252	k—	305
e-a	297	n-n	242, 290
i-i	194, 215, 242, 290, 297, 300, 305, 312, 350, 352	h-h	215
o-o	252, 336, 356, 357	h—	352
o-u	287, 357	s-h	239, 252, 298
u-u	194, 212, 298	t-t	258, 324, 352, 356
u-a	258	t-s	329
u-i	212, 239	t-dr	357
u-o	212, 284, 329	m-m	258, 312, 318, 324
l-l	194, 212, 252, 284, 287, 297, 305, 312	v-f	242
l-r	336, 350	v-w	291
ng-ng	274, 336, 350	f-v	147, 215, 290
		f-h	290, 329
		f-b	287
		p—	284

Identical.....194, 300, 305

Identical (terminally

abraded).....312, 356

Consonant identity....212, 274, 284, 318, 324, 352

Consonant mutation:

Vowel identity.....215

Terminal abrasion.....147, 242, 287, 290, 312, 318, 329

Frontal abrasion.....284, 305, 350

Frontal accretion.....212, 242, 274, 298

Terminal accretion....258, 336

ANEITYUM.

POLYNESIAN 67

QUALITY 46

	a	a, e, i, o, u	
	e	e, a, i	o o, i, u
i	i, a, e, o	u	u, e, i, o, v, p
	l	l, r, j, k	
ng	ng, k, g, nj	n	n, ny
		h	h, j, f
		s	s, h
		v	v, p, w
		f	f, p, u, k, w, h
k	k, g, ng	t	t, s, th
		p	p, l

a-a	147, 188, 198, 207, 214, 217, 229, 256, 258, 260, 262, 279, 282, 291, 293, 294, 307, 309, 312, 313, 317, 318, 320, 323, 324, 337, 339, 340, 350	ng-ng	285, 350
a-e	198, 216, 217, 256, 268, 278, 294	ng-k	309
a-i	271, 274, 350	ng-g	342, 309
a-o	124, 294	ng-nj	274
a-u	168, 307, 316, 328	k-k	126, 194, 269, 301, 328
e-e	173, 240	k-g	188, 258, 306, 361
e-a	126	k-ng	191, 204
e-i	191	n-n	147, 271, 294, 317
i-i	154, 194, 204, 241, 268, 288, 291, 319, 323	n-ny	328
i-a	154	h-h	278
i-e	342	h-j	340
i-o	269	h-f	339
o-o	126, 205	s-s	188, 198, 206, 323, 337, 342, [344
o-i	285	s-h	204, 205
o-u	205	t-t	126, 207, 216, 217, 256, 258, 268, 269, 274, 282, 293, 294, 306, 324, 347, 349, 350
u-u	168, 194, 269, 273, 288, 294, 320, 326, 344	t-s	318, 327, 337
u-e	278, 306	t-th	168
u-i	271	m-m	124, 191, 198, 216, 217, 256, 258, 274, 282, 294, 312, 316, 317, 318, 319, 320, 323, 324, 326, 328, 340
u-o	329, 360	f-f	293, 294
u-v	206	f-p	147
u-p	262	f-k	206
l-l	191, 228, 241, 307, 309, 310, 316, 320, 339, 349	f-u	214
l-r	126, 194, 205, 260, 268, 288, 335	f-h	147, 271, 273, 288, 294, 329, [360
l-k	312, 350	f-w	283
l-j	154, 312	v-v	294, 310
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Vowel identity (ter. abra)	147, 188, 273, 309	Terminal accretion	206, 274, 307, 310, 319, 324, 326, 339, 340, 347

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QUALITY 75

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			e <i>e,</i>	<i>a, i</i>	o <i>o</i>				
		i <i>i</i>				u <i>u, i, o</i>			
				l <i>l, r</i>					
	ng <i>ng</i>			n <i>n, l</i>		m <i>m</i>			
				h <i>h</i>					
				s <i>h</i>					
						v <i>w, —</i>			
						f <i>v, w</i>			
	k <i>g</i>			t <i>t, d, h</i>		p <i>p, v, kpw</i>			
a-a	152, 160, 193, 209, 214, 215, 217, 250, 258, 284, 290, 291, 292, 294, 309, 312, 313, 317, 318, 324, 328, 352, 356	n-n	285, 290, 292, 309, 317, 328, 330						
a-e	278, 300	n-l	259						
a-o	357	h-h	215, 278, 352						
e-e	122, 153, 190, 290, 318	s-h	239						
e-a	272	t-t	160, 209, 217, 258, 294, 306, 318, 324, 352, 356						
e-i	152	t-d	357						
i-i	149, 193, 215, 259, 290, 291, 300, 312, 313, 329, 330, 352, 153, 160, 259, 285, 309, 326, 356, 357	t-h	329						
o-o	212, 258, 272, 278, 284, 292, 294, 306, 317, 328, 330	m-m	217, 258, 312, 313, 317, 318, 324, 328						
u-u	212, 329	v-w	291						
u-i	239	v—	152						
u-o	152, 153, 212, 284, 312, 313	f-v	122, 193, 214, 215, 272, 290, 292, 294						
l-l	149, 160, 335, 336	f-w	259						
l-r	209, 309, 336	p-p	190, 250						
ng-ng	149, 193, 250, 258, 300, 301, 306, 357	p-v	284						
k-g		p-kpw	285						

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324, 328, 330, 335, 336, 352, 356

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		l <i>l, j, mj</i>		
ng <i>ng, n, g</i>		n <i>n</i>	m <i>m</i>	
		h —		
		s <i>y, k</i>		
			v <i>v, u</i>	
			f <i>v, b, mb</i>	
			p <i>b, mb</i>	
	k <i>k, mk</i>	t <i>t, j, dr</i>		
a-a	147, 240, 263, 292, 308, 309, 313, 340	l-j	309, 312, 313	
a-e	156, 254, 315, 317, 320, 340, 346, 350, 352a	l-mj	336	
a-i	350	ng-ng	285, 336, 346	
a-o	156, 228, 278, 292, 312, 364	ng-n	308, 350	
a-u	290	ng-g	309	
e-e	190	k-k	149, 156, 194, 211, 305	
e-a	240	k-mk	297	
e-i	210, 297	n-n	147, 156, 254, 290, 292, 317, 321	
e-o	247, 290	h —	278, 340	
i-i	149, 194, 211, 254, 273, 290, 297, 308, 321, 346, 350, 352, 362	s-y	182	
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o-i	336	t-dr	359	
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u-i	247, 359, 364	v-v	210	
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		f-v	254, 290, 292	
		f-b	273, 282, 290	
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	i <i>i, u</i>	u <i>u</i>	
		l <i>l, r, —</i>	
ng <i>ng</i>		n <i>n</i>	m <i>m</i>
		h —	
		s	
			v <i>v, w</i>
			f <i>v, p, w</i>
k <i>k, —</i>		t <i>t, nd, k</i>	p <i>p, b, mb</i>
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o-o 336		t-k 270	
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			e <i>e, i</i>	o <i>o</i>			
		i <i>i</i>			u <i>u</i>		
			l <i>l, r</i>				
ng <i>ng</i>			n <i>n</i>			m <i>m</i>	
			h <i>h, th</i>				
			s <i>s, th</i>				
						v <i>v</i>	
						f <i>v</i>	
						p <i>v, mb</i>	
	k <i>g, —</i>		t <i>t</i>				
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		l	l, m, —	
		n	n, l	
		h	h	
		s	h, s	
		t	t, d, s, h	
		ng	ng, m	
		m	m	
		v	u	
		f	f, v, b	
		p	b, m	
a-a	156, 199, 207, 216, 217, 240, 256, 258, 260, 263, 270, 278, 290, 291, 292, 293, 294, 300, 302, 309, 312, 313, 315, 317, 318, 322, 323, 324, 340, 352, 364	l—	364	
a-e	320, 350	ng-ng	285, 309, 336, 350	
a-o	148, 350	ng-m	199	
a-u	252	k-k	156, 258, 297, 300, 302, 305, 323	
e-e	210, 290, 311, 318	n-n	156, 292, 317, 321	
e-a	240	n-l	259	
e-i	297	h-h	278, 340, 352	
i-i	259, 270, 290, 291, 297, 298, 300, 302, 312, 321, 323, 329, 350, 352	s-s	323	
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u-u	148, 216, 258, 270, 278, 292, 294, 298, 317, 320, 321, 344, 358, 364	t-d	210	
u-i	156, 329	t-s	350, 352, 356	
l-l	252, 260, 297, 305, 309, 311, 312, 315, 320, 336, 350	t-h	329	
l-m	322	m-m	156, 216, 217, 258, 312, 313, 315, 317, 318, 320, 321, 322, 323, 324, 340	
		v-u	291	
		f-f	282, 290, 292	
		f-v	210, 259, 293, 294, 329	
		f-b	148	
		p-b	285	
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	i	<i>i</i>		u <i>u, o</i>
		l	<i>l, r, t, th</i>	
		n	<i>n, ng, gn</i>	m <i>m, r</i>
		h	<i>h</i>	
		s	<i>h</i>	
				v <i>mb</i>
				f <i>v</i>
				p <i>p, mb</i>
	k	<i>k, g</i>	t <i>t, nd, th</i>	
a-a	147, 213, 214, 217, 239, 275, 284, 309, 312, 313, 316, 317, 322, 328, 338, 339, 346, 351, 352		ng-ng	213, 285, 309, 346
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a-o	275		k-g	275, 301, 305, 306, 338
e-e	122, 257, 290, 338		n-n	147, 290, 317, 330
e-a	272		n-ng	351
i-i	285, 290, 298, 305, 312, 313, 329, 330, 346, 352		n-gn	328
o-o	147, 285, 309		h-h	278, 298, 338, 339, 352
o-a	257		s-h	239, 251
u-u	239, 272, 278, 284, 298, 306, 316, 317, 328, 329, 330, 351		t-t	217, 306, 343, 346, 352
u-o	343		t-nd	329
l-l	257, 305, 312, 313, 316		t-th	343
l-r	272, 284, 322		m-m	217, 257, 312, 313, 316, 317, 322, 328
l-t	339		m-r	322
l-th	309		v-mb	291
			f-v	122, 147, 213, 214, 272, 290, 329
			p-p	284
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	i <i>i, a, ɛ</i>	u <i>u, a, o</i>	
		l <i>l, r, nd</i>	
ng <i>ng, n</i>		n <i>n, gn, l</i>	m <i>m</i>
		h <i>s</i>	
		s <i>s, h</i>	
			v
			f <i>h</i>
k—		t <i>t, d, s</i>	p <i>b, mb, v, w</i>
a-a	207, 217, 313, 318, 324, 328, 350, 352, 360	ng-ng	285, 308, 350
a-e	158, 300, 308	ng-n	285
a-u	239	k—	300, 306
e-e	190, 318, 363	n-n	259, 330, 343
e-a	190, 257	n-gn	328
e-o	247	n-l	259
i-i	259, 285, 300, 308, 343, 350, 352	h-s	352, 362
i-a	355	s-s	298, 343, 344
i-e	298, 313, 330	s-h	239
o-o	259, 285, 263	t-t	207, 217, 306, 318, 324, 350, 352, 355
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o-u	285	t-s	247
u-u	158, 207, 237, 247, 298, 306, 328, 330, 344	m-m	158, 217, 258, 313, 318, 324, 328
u-a	343	f-h	259, 360, 363
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l-r	257, 355	p-v	247
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		e <i>e</i>		o <i>o</i>			
	i <i>i</i>				u <i>u, i</i>		
			l <i>l</i>				
ng <i>ng</i>			n <i>n</i>			m <i>m</i>	
			h <i>s</i>				
			s <i>s</i>				
						v <i>w</i>	
						f <i>h</i>	
k—			t <i>t, —</i>			p <i>p</i>	
a-a	217, 239, 250, 291, 300, 301, 309, 317, 350, 351, 352, 360		k—	250, 300, 301, 306			
e-e	190		n-n	259, 317, 330			
i-i	259, 291, 300, 329, 330, 350, 352		h-s	352			
o-o	259, 309		s-s	239, 298, 351			
u-u	239, 298, 306, 317, 329, 330, 351, 360		t-t	329			
u-i	301		t—	217, 306, 350, 352			
l-l	309, 350		m-m	217, 317			
ng-ng	309, 350		v-w	291			
			f-h	259, 329, 360			
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			l <i>l</i>				
ng			n			m <i>m</i>	
			h <i>h, —</i>				
			s				
						v <i>b</i>	
k <i>k</i>			t <i>t, k</i>			f <i>v</i>	
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a-a	214, 278, 324, 339, 360		h-h	339			
a-e	307, 335		h—	278			
a-u	307, 324		t-t	306, 358			
i-i	194		t-k	324			
o-o	285		m-m	324			
u-u	194, 212, 278, 306, 335, 358		v-b	307			
l-l	194, 212, 307, 335, 339		f-v	214, 360			
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ng ng, n	l	l, r	
	n	n	m m
	h—		
	s		
			v
			f b, w, —
k k, —	t	t, nd	p b

a-a	74, 147, 164, 169, 207, 214, 217, 275, 290, 292, 294, 300, 309, 313, 316, 318, 320, 324, 328, 350, 352	ng-n	74
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e-a	272, 290	k—	300
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i-u	321, 329	h—	352
o-o	269, 336	t-t	74, 164, 207, 217, 269, 294, 318, 324, 325, 343, 350, 352, 358
o-u	285, 325	t-nd	329
u-u	207, 272, 292, 316, 320, 327, 328, 329, 332, 343, 358	m-m	217, 312, 313, 314, 316, 318, 319, 320, 321, 324, 325, 327, 328
u-a	325	f-w	122, 147, 169, 214, 290, 292, 294, 329
u-o	314	f-b	272
l-l	149, 164, 309, 312, 313, 314, 316, 336, 350	f—	360
l-r	320, 332	p-b	207, 285
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	l l, r		
ng	n n	m m	
	h h		
	s s		
		v	
		f v	
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e-o	363	h-h	47, 363
i-i	47, 200, 330	s-s	343
o-o	75, 363	t-t	47, 75
o-a	186	m-m	200, 202
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	e <i>e</i>	o <i>o</i>		
	i <i>i, e, o</i>	u <i>u, e, o</i>		
ng <i>ng, g</i>		l <i>l, r, h</i>		
		n <i>n</i>	m <i>m</i>	
		h <i>h, s</i>		
		s <i>s</i>		
			v <i>u</i>	
			f <i>v, p, b, s</i>	
k <i>k, h</i>		t <i>t, d, s</i>	p <i>p, mp</i>	
a-a 218, 270, 274, 294, 337, 338, 349, 360		ng-g 350		
a-e 217, 278, 317, 350		k-k 194, 305, 361		
a-i 217, 290		k-h 338		
a-o 350		n-n 290, 317		
a-u 324		h-h 278		
e-e 240		h-s 206, 338		
i-i 194, 270, 274, 290, 305, 312, 350		s-s 337		
i-e 206		t-t 217, 270, 274, 294, 324, 349, 350		
i-o 305		t-d 352a		
o-o 282, 285		t-s 329		
u-u 194, 240, 270, 273, 282, 360		m-m 217, 274, 312, 317, 324		
u-e 278		v-u 291		
u-o 317, 329		f-v 282, 290, 294		
l-l 312, 349, 350		f-p 206, 273b		
l-r 194, 312		f-b 329, 360		
l-h 305		f-s 290		
ng-ng 274		p-p 285		
		p-mp 218, 361		
Identical	194, 218, 270, 274, 285, 337			
Terminal abrasion . . .	312, 349			
Consonant identity . . .	217, 317			
Consonant mutation:				
Vowel identity	282, 350, 360			
Terminal abrasion . . .	273, 294			
Terminal abrasion	206, 273, 290, 294, 312, 329, 338, 349			
Frontal accretion	270, 273, 282, 291, 312			
Terminal accretion . . .	218, 305, 317, 337			

FAGANI.

POLYNESIAN 39
QUALITY 82

		a <i>a, e, i, o</i>	
	e <i>e, a</i>	o <i>o, a</i>	
	i <i>i, e, u</i>	u <i>u</i>	
ng <i>ng</i>		l <i>r</i>	
		n <i>n, ng, l</i>	m <i>m</i>
		h <i>s</i>	
		s <i>s</i>	
			v <i>f</i>
			f <i>f, v</i>
k <i>k, g</i>		t <i>t, k, —, w</i>	p <i>p, b, f</i>
a-a 147, 214, 217, 239, 250, 258, 278, 292, 294, 300, 307, 309, 312, 313, 316, 318, 324, 328, 342, 350, 352, 357, 360		k-k 149, 250	
a-e 290		k-g 214, 251, 258, 300, 357	
a-i 292		n-n 147, 290, 292, 317, 328, 330, 342	
a-o 250		n-ng 351	
e-e 190, 257, 290, 318		n-l 259	
e-a 122, 272		h-s 352 <i>b</i>	
i-i 149, 259, 273, 278, 285, 300, 312, 329, 330, 342, 350, 352 <i>b</i>		s-s 239, 251, 298, 342, 351	
i-e 290		t-t 258	
i-u 298, 313		t-k 329, 350	
o-o 147, 259, 285, 309, 357		t— 294, 318, 352, 357, 358	
o-a 257		t-w 217	
u-u 239, 258, 272, 273, 292, 294, 298, 316, 317, 328, 329, 330, 351, 358, 360		m-m 217, 257, 258, 312, 313, 316, 317, 318, 324, 328	
l-r 257, 272, 278, 307, 309, 312, 313, 316, 350, 358		v-f 307	
ng-ng 278, 285, 309, 350		f-f 122, 147, 214, 259, 290, 292, 294, 329, 360	
		f-v 272, 273	
		p-p 190	
		p-b 285	
		p-f 250	

Identical. 147, 190, 239, 294, 309, 312, 316, 317, 328, 330,
342, 360

Consonant identity. 122, 257, 272, 290, 292, 298, 313

Vowel identity. 217

Consonant mutation:

Vowel identity. 214, 258, 259, 273, 278, 285, 300, 307, 318, 329,
350, 352

Terminal abrasion. 324

Frontal abrasion. 351, 352

Frontal accretion. 298, 351

Terminal accretion. 257

GOG.

POLYNESIAN 38
QUALITY 76

		a <i>a, e</i>	
	e <i>e, o</i>	o <i>o</i>	
i <i>i, e, u</i>		u <i>u, a, i, o</i>	
ng <i>ng, n</i>	l <i>l, r, ng, nd</i>	m <i>m</i>	
	n <i>n, ng</i>		
	h <i>s</i>		
	s <i>s</i>		
		v <i>v, w</i>	
		f <i>v, w</i>	
k <i>g, w</i>	t <i>t, m</i>	p <i>b, v, mb, kpw</i>	
a-a 123, 147, 203, 214, 217, 239, 268, 301, 307, 309, 313, 317, 318, 322, 324, 328, 339, 356	ng-n 285		
a-e 324	k-g 151, 251, 300, 301, 338, 357		
e-e 122, 190	k-w 306		
e-o 272	n-n 147, 317, 328, 343		
i-i 154, 312, 313, 342	n-ng 342		
i-e 300	h-s 206, 338, 339		
i-u 206	s-s 203, 239, 251, 278, 342		
o-o 147, 285, 309, 336, 356, 357	t-t 268, 306, 318, 324, 343, 356, 357, 358		
u-u 239, 284, 298, 306, 343, 358	t-m 217		
u-a 151	m-m 217, 312, 313, 317, 318, 322, 324, 328		
u-i 301	v-v 307		
u-o 272	v-w 206		
l-l 123, 154, 203, 284, 307, 309, 312, 313, 339	f-v 122, 147, 214		
l-r 268, 272, 322, 336, 358	f-w 272, 360		
l-ng 123	p-v 284		
l-nd 335	p-b 190		
ng-ng 154, 298, 309, 336	p-mb 151		
	p-kpw 285		

Identical 239, 309, 313, 356, 358

Terminal abrasion . . . 154, 203, 268, 307, 312, 317, 318, 328, 336, 343

Consonant identity . . . 301, 324

Vowel identity 217, 306

Consonant mutation:

Vowel identity 147, 214

Terminal abrasion . . . 190, 206, 284, 285, 338, 339, 342, 357

Terminal abrasion 151, 154, 190, 206, 268, 284, 285, 300, 306, 307, 312, 317, 318, 324, 328, 338, 342, 343

Frontal accretion 203, 272, 298, 301, 312, 339

Terminal accretion 122, 336

GUADALCANAR.

POLYNESIAN	6
QUALITY	66

	a	i	e	a	a	o	o	u	u,	i
		ng	ng		l	r,—		m	m	
					n	n		v	v	b
	k			t	s	s	p	f	v	b
a-a	278, 309, 328			ng-ng	285, 298, 309					
e-a	272			n-n	328					
i-i	285			h-th	278					
o-o	285, 309			s-s	298					
u-u	272, 278, 298, 328			m-m	328					
u-i	298			f-v	272					
l-r	272			p-b	285					
l—	309									

Identical 278, 328

Consonant identity 296

Consonant mutation:

Vowel identity 285

IAI.

POLYNESIAN	5
QUALITY	40

[illegible]

Identical 194

Vowel identity 324

KABADI.

POLYNESIAN 3
QUALITY 33

a-a 74, 292
i-i 330
i-u 74
u-u 292, 330

ng-n 74
n-n 292, 330
t-k 74
f-v 292

Identical 330

KABAKADA.

POLYNESIAN 6
QUALITY 50

a-a 147, 214, 320
e-a 122
i-i 327
o-o 147
o-u 285
u-u 320, 327
l-l 327

l-r 320
ng-ng 285
n-n 147
m-m 320, 327
f-w 147, 214
p-b 285

Identical 214, 320, 327

KALIL.

POLYNESIAN 6
QUALITY 17

a-a 294, 322, 352
i-i 312
i-u 329
o-u 296
u-u 329
l-l 312, 322

n-n 296
h-s 352
t-t 294, 352
t-dd 329
m-m 312, 322
f-h 294, 296, 329

Identical 312

KING.

POLYNESIAN 32
QUALITY 53

		a <i>a, e, i, o, u</i>	
		e <i>e, a, i, o</i> o <i>o, a, i, u</i>	
	i <i>i, e, u</i>	u <i>u, i</i>	
		l <i>l, r</i>	
ng <i>ng, n</i>		n <i>n, ng</i>	m <i>m</i>
		h <i>s</i>	
		s <i>s</i>	
			v
			f <i>v, w, p</i>
k <i>k</i>		t <i>t, d, k, n</i>	p <i>b, mb</i>
a-a	147, 213, 217, 258, 294, 309, 313, 318, 324, 329, 350, 352	l-l	309, 312, 313, 336, 349, 350
a-e	151, 323	l-r	320, 358
a-i	320, 323	ng-ng	213, 264, 309, 336, 350
a-o	213	ng-n	74, 151
a-u	74, 266	k-k	196
e-e	151	n-n	147, 151, 296, 321
e-a	313	n-ng	266, 342, 343
e-i	47	h-s	47, 352, 363
e-o	247, 363	s-s	264, 323, 342, 343, 344
i-i	47, 196, 312, 319, 321, 323, 352	t-t	74, 196, 217, 247, 258, 266, 294, 318, 324, 350, 352, 358
i-e	342	t-d	47
i-u	74	t-k	349
o-o	196, 336, 363	t-n	329
o-a	264	m-m	217, 258, 312, 313, 318, 319, 320, 321, 323, 324
o-i	349	f-v	147, 213, 363
o-u	296	f-w	294, 329
u-u	258, 320, 321, 329, 343, 344, 358	f-p	296
u-i	247, 296	p-b	247
		p-mb	151

Identical 196, 217, 321, 324, 336, 358

Terminal abrasion . . . 309, 318, 344

Consonant identity . . . 264, 312, 313, 320, 350

Consonant mutation:

Vowel identity 343, 352

Terminal abrasion . . . 294

Terminal abrasion 266, 294, 309, 318, 329

Frontal abrasion 151

Frontal accretion 213, 266, 312, 318, 358

Terminal accretion 147, 213, 264, 336, 343

Metathesis 196

LAKON.

POLYNESIAN 32
QUALITY 75

				a a, e, i			
			e a, e	o o, a			
	i i, e			u u, au			
		l l, ng, dr					
ng ng, n		n n		m m			
		h h					
		s s, h					
				v			
				f v, w			
				p p, v, kpw			
	k g, w	t t, m					
a-a	123, 147, 193, 214, 217, 239,	ng-ng	309, 350				
	292, 301, 309, 313, 317, 318,	ng-n	285				
	324, 328, 335, 337, 350, 351	k-g	193, 275, 301				
a-e	275, 324, 350	k-w	251, 306				
a-i	275	n-n	147, 292, 328, 351				
e-e	190	h-h	206, 278				
e-a	122	s-h	239, 351				
i-i	193, 313	s-s	337				
i-e	206, 312	t-t	306, 318, 343, 350, 356				
o-o	147, 285, 356	t-m	217				
o-a	123	m-m	217, 312, 313, 317, 318, 328				
u-u	278, 284, 292, 306, 328, 335,	f-v	122, 147, 193, 214, 272, 292				
	343, 351	f-w	206, 360				
u-au	239	p-p	190				
l-l	123, 284, 309, 312, 313, 350	p-v	284				
l-ng	123	p-kpw	285				
l-dr	335						

Identical 214, 313, 328, 337, 351

Terminal abrasion . . . 190, 278, 309, 318, 343, 356

Consonant identity . . . 312, 317, 324, 350

Vowel identity 217

Consonant mutation:

Vowel identity 147, 285

Terminal abrasion . . . 193, 206, 284, 292, 306, 351

Terminal abrasion . . . 190, 193, 206, 217, 278, 284, 292, 301, 306, 309,
312, 317, 318, 343, 351, 356

Frontal accretion 272, 301, 312

Terminal accretion . . . 328, 335, 350

LAMASSA.

POLYNESIAN 29
QUALITY 69

	a	<i>a, e, u</i>	
	e	<i>e, a, o</i>	o <i>u</i>
i	<i>i, e, u</i>		u <i>u, o, i</i>
	l	<i>l, r, nl</i>	
ng <i>ng, n</i>	n	<i>n, ng</i>	m <i>m</i>
	h	<i>s</i>	
	s	<i>s</i>	
			v
			f <i>f, v, p, —, w</i>
k <i>k</i>	t	<i>t, k, n</i>	p <i>b, mb, m</i>

a-a	213, 216, 292, 294, 309, 313, 316, 317, 318, 324, 350	k-k	196
a-e	151, 350	n-n	292, 296, 317, 343
a-u	74, 266	n-ng	266, 342
e-e	151, 190	h-s	47, 280, 363
e-a	47	s-s	342, 344
e-o	247	t-t	47, 74, 196, 247, 266, 294, 318, 324, 342, 350, 358
i-i	47, 196, 312, 313, 319, 342	t-k	216
i-e	342	t-n	329
i-u	74	m-m	216, 312, 313, 316, 317, 318, 319, 324
o-u	196, 285, 296, 363	f-f	292, 294
u-u	247, 292, 316, 329, 343, 344, 358	f-v	280, 363
u-o	216	f-p	296
u-i	317, 343	f-w	329
l-l	309, 312, 313, 350	f—	213
l-nl	316	p-b	190, 247
l-r	358	p-mb	151, 285
ng-ng	213, 285, 309, 350	p-m	190
ng-n	74, 151		

Identical 313, 319, 324, 344, 358

Terminal abrasion . . . 292, 294, 309, 312, 318

Consonant identity . . . 196, 213, 317, 343, 350

Vowel identity 316

Consonant mutation:

Vowel identity 47, 247

Terminal abrasion . . . 151, 363

Terminal abrasion 190, 266, 280, 285, 292, 294, 296, 309, 312, 318, 329,

342, 363

Frontal abrasion 151, 213, 216

Frontal accretion 216, 289, 344, 358

Terminal accretion 213

LAMBELL.

POLYNESIAN 32
QUALITY 81

		a	<i>a, e, o, u</i>	
		e	<i>e, a, o</i>	o <i>o, u</i>
	i	<i>i, u</i>		u <i>u, a, i, o</i>
		l	<i>l, r</i>	
ng	<i>ng, n</i>	n	<i>n, ng</i>	m <i>m</i>
		h	<i>s</i>	
		s	<i>s</i>	
				v
				f <i>p, h</i>
	k <i>k</i>	t	<i>t, k, n</i>	p <i>b, mb</i>
a-a	74, 347, 213, 216, 292, 294, 309, 312, 316, 317, 318, 324, 346, 350, 352	l-r	320, 358	
a-e	151, 342	ng-ng	213, 264, 309, 336, 346, 350	
a-o	321	ng-n	74	
a-u	266	k-k	149, 196	
e-e	151, 190	n-n	147, 151, 292, 296, 317, 343	
e-a	47	n-ng	266, 342	
e-o	247	h-s	47, 352	
i-i	47, 149, 196, 312, 319, 342, 346, 352	s-s	264, 342, 344, 346	
i-u	74	t-t	47, 74, 196, 247, 266, 294, 318, 324, 343, 346, 350, 352, 358	
o-o	196, 264, 336	t-k	216	
o-u	296	t-n	329	
u-u	247, 292, 329, 343, 344, 358	m-m	216, 312, 316, 317, 318, 319, 320, 324	
u-a	316	f-p	296	
u-i	317, 343	f-h	147, 213, 292, 294, 329	
u-o	216, 320	p-b	190, 247	
l-l	149, 309, 312, 316, 336, 350	p-mb	151	

Identical. 196, 312, 319, 324, 336, 346, 358

Terminal abrasion. . . 149, 264, 309, 318, 344

Consonant identity. . . . 74, 247, 316, 317, 343, 350

Consonant mutation:

Vowel identity. 47, 213, 292, 342, 352

Terminal abrasion. . . 147, 151, 294

Terminal abrasion. . . . 147, 149, 264, 266, 294, 296, 318, 329

Frontal abrasion. 151

Frontal accretion. 190, 264, 318, 344, 358

Terminal accretion. . . . 213, 336

LAUR.

POLYNESIAN 28
QUALITY 75

		a <i>a, e, u</i>	
	e <i>e, a, i, o</i>	o <i>o, i, u</i>	
i <i>i</i>		u <i>u, i, o, h</i>	
	l <i>l, r</i>		
ng <i>ng, n</i>	n <i>n, ng</i>	m <i>m</i>	
	h <i>s</i>		
	s <i>s</i>		
		v	
		f <i>v, h</i>	
k <i>g</i>	t <i>t, n</i>	p <i>b, mb</i>	
a-a 156, 216, 217, 292, 294, 309, 313, 315, 316, 317, 318, 324, 350, 352	l-r 257		
a-e 295	ng-ng 309, 350		
a-u 266	ng-n 151		
e-e 151, 190	k-g 156		
e-a 47	n-n 151, 156, 292, 296, 317		
e-i 257	n-ng 266, 342		
e-o 247	h-s 47, 352, 363		
i-i 47, 295, 312, 313, 319, 350	s-s 343, 344		
o-o 363	t-t 47, 216, 217, 292, 294, 309, 313, 315, 316, 317, 318, 324, 350, 352		
o-i 257	t-n 329		
o-u 296	m-m 156, 216, 217, 257, 312, 313, 315, 316, 317, 318, 319, 324		
u-u 156, 216, 292, 316, 329, 344	f-v 363		
u-i 247	f-h 292, 294, 296, 329		
u-o 343	p-b 190, 247		
u-h 295	p-mb 151		
l-l 295, 309, 312, 313, 315, 316, 350			

Identical. 217, 313, 334, 344, 350

Terminal abrasion. . . 309, 312, 317, 318, 319

Consonant identity. . . 257, 315, 316

Consonant mutation:

Vowel identity. 47, 190, 292

Terminal abrasion. . . 151, 156, 294, 352, 363

Terminal abrasion. . . . 151, 156, 266, 294, 296, 309, 312, 315, 317, 318,
319, 329, 343, 352, 363

Frontal abrasion. 151

Frontal accretion. 216, 352

Terminal accretion. . . 216, 257, 316

LEMARORO.

a-a	258, 274	ng-ng	274
i-i	274	k—	258
u-u	258	t-l	258
l-l	274		

LEON.

POLYNESIAN 10
QUALITY 90

		a	<i>a, e, o</i>		
		e	<i>e, i</i>	o	<i>o</i>
	i	<i>i</i>			u <i>o</i>
		l	<i>l, r</i>		
ng		n	<i>n</i>		m <i>m</i>
		h			
		s	<i>s</i>		
					v <i>w</i>
					f <i>v</i>
k <i>g</i>		t—			p
a-a	147, 214	o-o	187	s-s	203, 337
a-e	193, 318, 337	u-o	292	t—	318
a-o	292, 307	l-l	307	m-m	318
e-e	122	l-r	203	v-w	307
e-i	203	k-g	193	f-v	122, 147, 193,
i-i	193	n-n	147, 187, 292		214, 292
Identical.....	214	Terminal abrasion...	147, 187, 193,		
Terminal abrasion...	187		203, 292, 318		
Consonant identity....	203, 318, 337	Frontal accretion....	187		
Consonant mutation:		Terminal accretion...	122		
Vowel identity.....	122, 214	Metathesis.....	139		
Terminal abrasion...	147, 193				

LIFU.

POLYNESIAN 7
QUALITY 42

		a	<i>a, e</i>		
		e	<i>e</i>	o	<i>o</i>
	i	<i>i</i>			u <i>u</i>
		l			
ng		n	<i>n</i>		m <i>m</i>
		h			
		s			
					v
					f
k <i>k</i>		t <i>k</i>			p <i>p</i>
a-a	214, 361	o-o	259	t-k	318, 324
a-e	318, 324	u-u	326, 330, 361	m-m	318, 324, 326
e-i	318	k <i>k</i>	361	p-p	361
i-i	259, 330	n-n	259, 330		
Identical.....	259, 330, 361				
Terminal abrasion...	324				
Frontal abrasion.....	214				

LO.

POLYNESIAN 37
QUALITY 84

		a <i>a, e, i, o</i>	
	e <i>e, a, i o o</i>		
	i <i>i, u</i>	u <i>u, i</i>	
		l <i>l, r, h</i>	
ng <i>ng, n, g</i>		n <i>n, ng</i>	m <i>m, mw, ng</i>
		h <i>j</i>	
		s <i>h</i>	
			v <i>v, p, w</i>
			f <i>v, w, h</i>
k <i>g</i>		t <i>t, nd</i>	p <i>p, kw</i>
a-a 152, 169, 193, 195, 214, 217, 290, 300, 301, 312, 324, 328, 339, 350		k-g 149, 169, 193, 195, 251, 300, 301, 305, 306, 357	
a-e 147, 169, 309, 313, 316, 318, 351		n-n 147, 169, 290, 317, 321, 328, 343	
a-i 307		n-ng 351	
a-o 317		h-j 339	
e-e 122		s-h 169, 239, 251, 351	
e-i 190, 193		t-t 195, 306, 318, 324, 343, 356, 357, 358	
e-a 290		t-nd 350	
i-i 149, 169, 290, 300, 305, 312, 313, 350		m-m 217, 312, 316, 317, 318, 324, 328	
i-u 321		m-mw 313	
o-o 285, 307, 336, 356, 357		m-ng 316	
u-u 212, 306, 316, 343, 351, 358		v-v 152	
u-i 239		v-p 291	
l-l 212, 305, 307, 309, 312, 313, 316, 350		v-w 307	
l-r 149, 152, 336		f-v 122, 147, 193, 214, 290	
l-h 335		f-w 290	
ng-ng 309, 336, 350		f-h 169	
ng-n 285		p-p 190	
ng-g 169		p-kw 285	

Identical. 214, 312, 324, 358

Terminal abrasion. 152, 212, 328, 336, 343, 356

Consonant identity. 152, 190, 217, 309, 316, 317, 318, 321

Consonant mutation:

Vowel identity. 169, 193, 195, 214, 285, 300, 305, 313, 350, 351

Terminal abrasion. 149, 306, 357

Terminal abrasion. 122, 147, 149, 152, 190, 195, 212, 306, 309, 317, 318, 321, 328, 339, 343, 356

Frontal abrasion. 217, 239

Frontal accretion. 290, 301, 312, 339, 351

Terminal accretion. 305, 336

MAEWO.

POLYNESIAN 39
QUALITY 87

			a <i>a, e, o</i>	
		e <i>e, i</i>	o <i>o</i>	
	i <i>i, u</i>			u <i>u, i</i>
		l <i>l, r, nd</i>		
ng <i>ng, n</i>		n <i>n, l</i>		m <i>m</i>
		h <i>s</i>		
		s <i>s</i>		
				v <i>mb, —</i>
				f <i>v, w, —</i>
k <i>k, g, w</i>		t <i>t, nd</i>		p <i>b, w, kmbw</i>
a-a	147, 152, 193, 214, 215, 239, 278, 284, 292, 309, 312, 313, 316, 317, 318, 324, 328, 346, 352	ng-n	285	
a-e	272, 291, 301, 337	k-k	149	
a-o	335	k-g	193, 214, 301, 357	
e-e	153, 190, 318	k-w	306	
e-i	152, 303	n-n	147, 292, 317, 328	
i-i	149, 193, 215, 259, 291, 298, 312, 313, 329, 346	n-l	259	
i-u	206	h-s	206, 215, 278, 352	
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ng-ng	309, 336, 346	f-v	147, 193, 214, 215, 272, 292	
		f-w	206, 259	
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		p-b	190	
		p-w	284	
		p-kmbw	285	

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l-r	281		

MAKURA.

POLYNESIAN 13
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	i <i>i, u</i>		u <i>u, i</i>
		l <i>l, r</i>	
ng <i>n, g</i>		n <i>n</i>	m <i>m</i>
		h <i>h</i>	
		s	
			v
			f <i>v, —</i>
			p
k <i>ngg, k</i>		t <i>t</i>	
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u-i 306		t-t 74, 165, 302, 306, 352	
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MALEKULA.

POLYNESIAN 68
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		l <i>l, r</i>	
ng <i>ng, n, g, m</i>		n <i>n, r</i>	m <i>m</i>
		h <i>s, j</i>	
		s <i>s</i>	
			v <i>v, w, u, pw</i>
			f <i>v, p, b, —, f, mbw</i>
k <i>k, kh, g, h, —</i>	t <i>t, j, r</i>		p <i>p, b, mb</i>

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a-i	157, 208, 252, 294, 315, 317, 352	k-g	211, 301, 306
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POLYNESIAN 61
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h s
s s

k k, g, v, —

t t, d, s

v u
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				l <i>l, r</i>					
ng <i>ng</i>				n <i>n, l, —</i>			m <i>m, n</i>		
				h <i>s</i>					
				s					
							v <i>p, t</i>		
							f <i>v</i>		
		k <i>g</i>		t <i>t, s</i>			p <i>p, v</i>		
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	352	t-s	350						
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	358	v-p	291						
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		e			
		l	r		
ng	ng	n	n		m m
		h			
		s			
				v	
				f	w, p
				p	b
k—		t	t		

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			e <i>i</i>	o <i>o</i>			
	i <i>i, u</i>				u <i>u</i>		
		l <i>l</i>					
ng <i>ng, n</i>		n <i>n, nj</i>			m <i>m</i>		
		h <i>s</i>					
		s <i>s</i>					
					v <i>u</i>		
					f <i>p, mb, t, —</i>		
k <i>k, —</i>		t <i>t, r, ndr</i>			p <i>p, mb, v</i>		
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a-e	215, 290	n-nj	328				
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o-o	126, 285	t-ndr	350, 352				
u-u	126, 239, 284, 317, 329, 330, 335, 360	m-m	312, 317, 324, 328				
ng-ng	285, 308, 350	v-u	291				
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ng <i>ng</i>			l <i>l, r, n, ng</i>		m <i>m, mw</i>
			n <i>n</i>		
			h <i>s</i>		
			s <i>s</i>		
				v <i>w</i>	
				f <i>v, w</i>	
				p <i>w</i>	
	k <i>g, ng, w</i>		t <i>t, m</i>		
a-a	123, 147, 214, 217, 239, 309, 317, 318, 328, 339, 357	l-n	335		
a-e	193, 324	ng-ng	154, 309, 336		
a-i	307	k-g	193, 251, 300, 357		
a-o	316	k-ng	301		
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u-u	272, 306, 316, 343	m-m	217, 316, 317, 318, 324, 328		
u-o	284	m-mw	312		
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		l <i>l, r, ng</i>	
ng <i>ng, n</i>		n <i>n, ng, l</i>	m <i>m, mw</i>
		h <i>h</i>	
		s <i>h</i>	
			v <i>mb, w</i>
			f <i>v, w</i>
k <i>g, ng</i>		t <i>t, nd, m</i>	p <i>b, w, kmbw</i>
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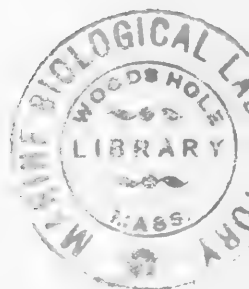
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				l l, r, ng, n					
	ng ng, g, n, m			n n, ng, l		m m, mw			
			h s						
			s s						
						v v, p, w, u			
						f v, w, t			
						p p, v, kpw			
	k g, ng, w			t t, s, r					
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i-o	341		k-w	306					
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352, 358

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MOTU.

POLYNESIAN 56
QUALITY 85

		a <i>a</i>	
	e <i>e, a, i, o</i>	o <i>o, u, ia</i>	
	i <i>i, e, o, u, ei</i>	u <i>u, a, o</i>	
		l <i>l, r, —</i>	
ng <i>n, —</i>		n <i>n</i>	m <i>m</i>
		h <i>d</i>	
		s <i>h, d</i>	
			v <i>v</i>
			f <i>v, h</i>
			p <i>p, b</i>
k <i>k, g, —, m</i>		t <i>t</i>	
a-a 125, 208, 214, 217, 268, 271, 292, 293, 301, 309, 310, 312, 313, 317, 318, 328, 334, 335, 339, 342, 346, 349, 350, 351, 352, 360, 364		l-l 243, 268, 309, 310, 335, 339, 354, 362	
e-e 190, 208, 318, 354, 363		l-r 182, 205, 241, 248, 272, 288, 304, 327, 331, 332, 334, 359, 364	
e-a 47, 272		l— 312, 313, 350	
e-i 190		ng— 285, 309, 332, 346, 350	
e-o 249		ng-n 125	
i-i 47, 241, 243, 249, 268, 304, 312, 313, 321, 327, 330, 342, 346, 350, 352		k-k 249	
i-e 273		k-g 299	
i-o 288		k-m 304	
i-u 362		k— 301, 306	
i-ei 319		n-n 271, 292, 317, 321, 328, 330, 334, 342, 343, 351	
o-o 201, 285, 309, 331, 349, 362, 363		h-d 47, 339, 352, 363	
o-u 205		s-h 182, 205	
o-ia 331		s-d 298, 342, 351	
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u-o 248, 328		v-v 310	
		f-h 201, 208, 243, 271, 272, 273, 288, 292, 360, 363	
		f-v 214, 293	
		p-b 125, 190, 241, 285	
		p-p 279	
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MURRAY ISLAND.

a-a	275	l-r	305
au-ai	301	k-k	275
u-u	305	k-g	301, 305

NATALAVA.

a-a	335, 350	l-l	350
a-u	350	l-r	335
i-i	350	ng-nd	350
u-u	335	t-k	350

NENGONE.

POLYNESIAN II
QUALITY 45

	a	<i>a, e</i>	o	<i>o</i>	
	e	<i>e</i>			
	i	<i>i, e</i>			u <i>u, e, o</i>
ng <i>ng</i>			l <i>l, r, n</i>		
			n <i>n</i>		m
			h		
			s <i>s</i>		
					v <i>w</i>
					f <i>w, —</i>
k <i>k, —</i>			t <i>t</i>		p <i>p</i>

a-a	214, 274, 361
a-e	300, 309, 322
e-e	122
i-i	300
i-e	245
o-o	309
u-u	330, 361
u-e	306
u-o	245, 306
l-l	274
l-r	335

l-n	309
ng-ng	274, 309
k-k	361
k—	300, 306
n-n	330
s-s	245
t-t	306
v-w	291
f-w	245
f—	122, 214
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Identical	361
Consonant identity	306, 335
Consonant mutation:	
Vowel identity	309, 330
Terminal abrasion	274
Frontal abrasion	122, 214, 306
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NEW GEORGIA.

		POLYNESIAN		16
		QUALITY		63
		a	a, o, u	
			o o	
			u u, o	
		i	i, e, o	
		e	e	
		l	l, r	
		n	m	m m
		h		
		s	s	
				v
				f
				p p, b
		t	t, s, m	
		k	k, h	
a-a	217, 300, 312, 313, 324, 350, 351, 361	l-r	192, 305	
a-o	361	ng-ng	285, 298, 350	
a-u	192	k-k	305, 361	
e-e	190	k-h	300, 301	
i-i	149, 285, 300, 312, 313, 350, 351	n-m	351	
i-e	305	s-s	351	
i-o	305	t-t	324, 350	
o-o	192, 285	t-s	298	
u-u	298, 351	t-m	217	
u-o	361	m-m	217, 312, 313, 324	
l-l	312, 313, 350	p-p	190, 192, 361	
		p-b	285	

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Consonant identity . . . 192, 305, 350

Consonant mutation:

Vowel identity 217, 285, 300

Frontal accretion 35I

Terminal accretion 149, 190, 300, 351

NGGAO.

POLYNESIAN 18
QUALITY 77

				a <i>a</i>					
			e <i>a</i>			o <i>o, i</i>			
		i <i>i, e, u</i>				u <i>u</i>			
		ng <i>ng</i>		l <i>l, r, k</i>				m <i>m</i>	
				n <i>n, m</i>					
				h <i>h</i>					
				s <i>s, h</i>					
								v	
								f <i>f, ng, kr</i>	
								p <i>mb</i>	
		k <i>k, g</i>		t <i>t</i>					
a-a	214, 215, 217, 239, 309, 312,			k-k	251				
	313, 324, 346, 352			k-g	305				
e-a	272			n-n	201				
i-i	215, 285, 305, 313, 346, 351,			n-m	351				
	352			h-h	215				
i-e	298, 313			s-s	251, 351				
i-u	305			s-h	239, 298				
o-o	201, 285, 309, 336			t-t	324				
o-i	336			m-m	217, 312, 313, 324				
u-u	239, 272, 298, 351			f-f	214, 272				
l-l	305, 309, 312			f-ng	215				
l-r	272			f-kr	201				
l-k	313			p-mb	285				
ng-ng	285, 309								

Identical. 214, 251, 312, 324, 346, 351

Consonant identity. . . . 272, 309, 336

Vowel identity. 201, 239, 309

Consonant mutation:

Vowel identity. 215, 285

Frontal abrasion. 217

Frontal accretion. 239, 272, 298, 309

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NGGELA.

					POLYNESIAN	61
					QUALITY	80
		a	a,	ai,	o,	u
	e	e,	i		o	o
	i	i			u	u
		l	l,	r		
ng	ng,	g	n	n,	ng,	l
			m	m,	v,	r
			h	h		
			s	s,	h	
					v	v
					f	v, mb
k	k,	g	t	t,	nd,	k
			p	b,	mb,	v
a-a	45, 147, 152, 197, 198, 203, 207, 208, 213, 214, 217, 239, 258, 272, 278, 284, 300, 309, 312, 313, 315, 316, 317, 318, 322, 323, 324, 328, 332, 338, 339, 342, 346, 352, 360		k-k	149, 251		
a-ai	290		k-g	258, 297, 300, 301, 305, 306, 323, 338		
a-o	45		n-n	290, 292, 296, 317, 321, 328, 330, 342		
a-u	350		n-ng	351		
e-e	122, 208, 290, 297, 318, 338		n-l	259		
e-i	152, 203		h-h	278, 323, 338, 339, 352		
i-i	149, 155, 259, 273, 285, 290, 297, 298, 300, 305, 312, 313, 321, 323, 327, 329, 330, 332, 342, 346, 350, 352		s-s	45, 203, 351		
o-o	197, 259, 285, 296, 309, 357		s-h	198, 239, 251, 298, 342, 346		
u-u	155, 207, 239, 258, 272, 273, 278, 284, 296, 298, 306, 316, 317, 321, 327, 328, 329, 330, 332, 351, 358, 360		t-t	207, 208, 217, 258, 294, 306, 318, 324, 346, 352, 358		
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l-r	203, 272, 327, 332, 358		t-k	350		
ng-ng	213, 285, 309, 332, 346		m-m	198, 217, 258, 312, 313, 315, 316, 317, 318, 322, 324, 327, 328		
ng-g	197		m-v	323		
			m-r	322		
			v-v	152		
			f-v	122, 147, 208, 213, 214, 259, 272, 273, 290, 294, 296, 329, 360		
			f-mb	292		
			p-b	45, 190		
			p-mb	207, 285		
			p-v	284		
Identical	152, 155, 214, 217, 309, 312, 313, 317, 318, 321, 324, 327, 328, 330, 332, 335, 339, 346, 352					
Consonant identity	203, 272, 315					
Vowel identity	259, 273, 316					
Consonant mutation:						
Vowel identity	122, 197, 198, 207, 208, 213, 239, 251, 258, 259, 273, 278, 284, 285, 290, 294, 296, 297, 298, 300, 306, 329, 338, 342, 351, 360					
Terminal abrasion	147, 350					
Frontal abrasion	332					
Frontal accretion	190, 197, 273, 305					
Terminal accretion	339					

NGUNA.

POLYNESIAN 16
QUALITY 93

		a <i>a</i>	
	e <i>e</i>	o <i>o, u</i>	
	i <i>i, a, u</i>	u <i>u</i>	
ng <i>ng, n</i>		l <i>l, r</i>	
		n <i>n</i>	m <i>m</i>
		h <i>s</i>	
		s	
			v
k <i>k</i>		t <i>t</i>	f <i>f, v, w</i>
			p
a-a 74, 75, 214, 261, 294, 301, 317, 318, 338, 346, 350		ng-ng 336, 346, 350	
e-e 261, 318, 338		ng-n 74	
i-i 206, 346, 350		k-k 214, 301, 338	
i-a 321		n-n 317, 321	
i-u 74		h-s 206, 338	
o-o 206, 336		t-t 74, 75, 294, 308, 346, 350	
o-u 75		m-m 75, 317, 318	
u-u 159, 294, 301, 317, 321		f-f 294	
l-l 75, 350		f-v 214	
l-r 159, 261, 336		f-w 206	

Identical. 159, 261, 294, 301, 317, 318, 336, 346, 350

Consonant identity. . . . 74, 75, 321

Consonant mutation:

Vowel identity. 206, 214, 338

Frontal accretion. 301, 321

NIFILOLE.

POLYNESIAN 13
QUALITY 66

				a	<i>a, e, o, u</i>		
			e		o	<i>o</i>	
		i	<i>i, a</i>			u	<i>u, i, o</i>
				l	<i>l, n</i>		
	ng			n	<i>n</i>		m <i>m</i>
				h			
				s	<i>s</i>		
							v
							f <i>v, p, w, n</i>
							p
	k	<i>k</i>		t	<i>t</i>		
a-a	214, 217, 239, 284, 360			l-n	313		
a-o	291, 357			k-k	149		
a-e	313			n-n	328, 330		
a-u	217			s-s	239		
i-i	149, 291, 313			t-t	217		
i-a	149			m-m	217, 313, 328		
o-o	357			f-v	294		
u-u	212, 330, 360			f-p	284		
u-i	239			f-w	214, 291		
u-o	284			f-n	360		
l-l	149, 212, 284						

Identical. 328

Consonant identity. . . . 149, 212, 217, 239, 330

Vowel identity. 360

Consonant mutation:

Vowel identity. 214

Terminal abrasion. 294

Frontal abrasion. 212

Frontal accretion. 239

Terminal accretion. 217, 284

NORBARBAR.

POLYNESIAN 37
QUALITY 54

				a	<i>a, e, i, o, u</i>	
			e	<i>e</i>	o	<i>o, a, e, i</i>
		i	<i>i, e</i>		u	<i>u, i, o</i>
				l	<i>l, r, nd</i>	
	ng	<i>ng, n</i>		n	<i>n</i>	m <i>m</i>
				h	<i>h</i>	
				s	<i>s, h</i>	
						v <i>p, w</i>
						f <i>v, w</i>
						p <i>p, b, mb, kmbw</i>
	k	<i>g, —, w</i>		t	<i>t, nd, m</i>	
a-a	147, 217, 239, 309, 317, 318,		k-g	193, 251, 301, 338		
	338		k—	300		
a-e	193, 300, 312, 328, 337, 350		k-w	306		
a-i	350		n-n	147, 292, 317, 328, 350		
a-o	75, 292, 307, 316		h-h	331, 338		
a-u	307		s-s	239, 251, 337		
e-e	122, 190		s-h	239		
i-i	300, 312		t-t	75, 306, 318, 324, 356, 358		
i-e	193		t-nd	350		
o-o	75, 285, 336, 356, 357		t-m	217		
o-a	147		m-m	75, 217, 312, 316, 317, 318,		
o-e	331			324, 328		
o-i	331		v-p	291		
u-u	212, 239, 289, 306, 316		v-w	307		
u-o	272		f-v	122, 147, 193, 214, 292		
u-i	292, 358		f-w	212, 360		
l-l	75, 289, 307, 309, 312, 316		p-p	190		
l-r	331, 336		p-b	190		
l-nd	335		p-mb	289		
ng-ng	309, 336, 350		p-kmbw	285		
ng-n	285					

Identical. 324

Terminal abrasion. 309, 317, 318, 336, 356

Consonant identity. 75, 316, 328, 331, 337, 358

Vowel identity. 217

Consonant mutation:

Vowel identity. 122, 212

Terminal abrasion. 147, 190, 289, 306, 338

Terminal abrasion. 147, 190, 193, 214, 217, 239, 289, 306, 309, 317,
318, 328, 336, 338, 356, 357

Frontal abrasion. 239

Frontal accretion. 301, 312

Terminal accretion. 122, 212, 307, 331, 336, 350

OMBA.

POLYNESIAN 40
QUALITY 75

				a <i>a, e, u</i>					
			e <i>e</i>		o <i>o</i>				
		i <i>i</i>				u <i>u, e, v</i>			
				l <i>l, r</i>					
		ng <i>ng, n</i>		n <i>n</i>			m <i>m</i>		
				h <i>h</i>					
				s <i>h</i>					
							v <i>v, w</i>		
							f <i>v, w</i>		
		k <i>g, w</i>		t <i>t, m</i>			p <i>b, mb</i>		
a-a	74, 147, 152, 169, 207, 214, 217, 239, 254, 290, 291, 292, 307, 309, 317, 318, 324, 338, 346, 351, 356			ng-ng	285, 309, 336, 346				
a-e	278, 284, 292, 295, 300, 312, 313			ng-n	74				
a-u	307			k-g	169, 214, 300, 301, 338				
e-e	122, 152, 153, 190, 290, 318, 338			k-w	306				
i-i	74, 169, 206, 254, 285, 290, 291, 295, 300, 312, 313, 346, 352			n-n	74, 147, 169, 254, 290, 292, 317				
o-o	153, 206, 285, 336, 356			h-h	169, 206, 278, 338, 352				
u-u	212, 239, 278, 284, 292, 306, 317, 358			s-h	239				
u-e	207			t-t	74, 207, 306, 318, 346, 352, 356, 358				
u-v	295			t-m	217				
l-l	153, 212, 284, 295, 307, 309, 312, 313			m-m	217, 254, 312, 313, 317, 318				
l-r	152, 335, 336			v-v	152				
				v-w	291, 307				
				f-v	122, 147, 206, 212, 214, 254, 284, 290, 292				
				f-w	360				
				p-b	190				
				p-mb	207, 285				

Identical. 74, 152, 153, 309, 317, 318, 335, 336, 346, 352, 356, 358

Terminal abrasion. 324

Consonant identity. 278, 312, 313

Vowel identity. 217

Consonant mutation:

Vowel identity. 169, 190, 206, 214, 239, 254, 285, 290, 291, 306, 338

Terminal abrasion. 147

Terminal abrasion. 147, 324, 336

Terminal accretion. 212, 313, 335, 336

PAAMA.

a-a	252, 274	u-i	329	s-s	252
a-e	312	l-l	274, 312	t-s	329
i-i	312, 329	l—	252	f-h	329
o-i	252	ng-ng	274		

PAK.

POLYNESIAN 31
QUALITY 45

	a	<i>a, e, o, u</i>	
	e	<i>e, i, u</i>	o <i>o, e</i>
	i	<i>i, e</i>	u <i>u, o</i>
		l <i>l, r, ng, t</i>	
ng <i>ng, n</i>	n <i>n</i>		m <i>m</i>
	h <i>s</i>		
	s <i>s</i>		
			v <i>w</i>
			f <i>v</i>
k <i>g, ng, w</i>	t <i>t, —, m</i>		p <i>p</i>

a-a	123, 147, 217, 250, 309, 318, 339, 357	l-t	335
a-e	214, 317, 324, 328, 337, 350	ng-ng	309
a-o	239, 292, 307	ng-n	350
a-u	250, 316	k-g	251, 300, 301, 357
e-e	122, 190	k-ng	301
e-i	203	k-w	306
e-u	272	n-n	292, 317, 328
i-i	300	h-s	339
i-e	312	s-s	203, 239, 251, 337
o-o	356, 357	t-t	350, 356
o-e	123	t—	270, 318, 324, 357
u-u	270, 272, 306, 316	t-m	217
u-o	292	m-m	217, 312, 316, 317, 318, 324, 328
l-l	123, 307, 309, 312, 316, 339, 350	v-w	307
l-r	203	f-v	122, 147, 214, 292
l-ng	123	p-p	190

Identical

Terminal abrasion . . . 190, 309

Consonant identity . . . 203, 239, 312, 316, 317, 328, 337

Vowel identity 324

Consonant mutation:

Vowel identity 122, 214

Terminal abrasion . . . 300, 339

Terminal abrasion 147, 190, 203, 214, 217, 239, 292, 300, 306, 309, 312, 317, 318, 328, 339, 356

Frontal abrasion 270

Frontal accretion 301, 312, 339

Terminal accretion 122, 350, 324, 335, 350

PALA.

POLYNESIAN 54
QUALITY 80

		a <i>a, e</i>	
	e <i>e, a, o</i>	o <i>o, a, e, u</i>	
i <i>i, e, u</i>		u <i>u, i, h</i>	
	l <i>l, r, n</i>		
ng <i>ng, n</i>	n <i>n, ng</i>	m <i>m</i>	
	h <i>s</i>		
	s <i>s</i>		
		v <i>b, u</i>	
		f <i>h, u, s</i>	
k <i>k, g, —</i>	t <i>t, d</i>	p <i>b, p</i>	
a-a 74, 147, 156, 214, 216, 217, 253, 290, 294, 307, 312, 313, 317, 318, 324, 350	ng-n 151		
a-e 215, 295, 352	k-k 196, 211		
e-e 47, 151, 203	k-g		
e-a 47, 122, 363	k— 151, 156		
e-o 247	n-n 147, 156, 201, 290, 317, 343		
i-i 215, 259, 290, 295, 312, 313, 350	n-ng 259		
i-e 211	h-s 47, 215, 352, 363		
i-u 329	s-s 203, 344		
o-o 201	t-t 47, 74, 125, 196, 211, 216, 217, 247, 289, 294, 318, 324, 343, 350, 352, 358		
o-a 363	t-d 329		
o-e 259	m-m 156, 216, 217, 253, 312, 313, 317, 318, 324		
o-u 196, 285	v-b 307		
u-u 125, 151, 156, 211, 216, 273, 289, 329, 343, 344	v-u		
u-i 247	f-h 122, 147, 201, 215, 214, 273, 290, 294, 329		
u-h 295	f-u 363		
l-l 203, 289, 295, 312, 313, 350	f-s 259		
l-r 358	p-b 125, 151, 247, 285, 289		
l-n 307	p-p		
ng-ng 285, 350			

(Note: **k-g**, **p-p**, and **v-u** do not appear in the material here collated, but each has been observed in other Polynesian loan words in Pala.)

Identical 156, 216, 203, 313, 324, 358

Terminal abrasion . . . 289, 317, 318, 343, 344

Consonant identity . . . 211

Consonant mutation:

Terminal abrasion . . . 147, 273, 294

Terminal abrasion 47, 74, 147, 151, 196, 201, 289, 290, 294, 317, 318, 343, 344, 352

Frontal accretion 74

Terminal accretion 312

Metathesis *afi-iah, tinā-étna.*

RALUANA.

a-a	214, 294	l-r	358
o-o	314, 336	ng-ng	336
u-u	358	t-t	294
l-l	314, 336	f-w	214, 294, 314

Terminal abrasion 294

Terminal accretion 314

RETAN.

POLYNESIAN 14
QUALITY 21

		a	<i>a, e, o</i>	
		e	<i>a, o, a, e</i>	
	i	e	<i>u, e, i</i>	
		l	<i>l, r, ng</i>	
		n	<i>n</i>	m <i>m, mw</i>
		h	<i>h</i>	
		s		
				v
				f <i>v</i>
				p
	k	g	t <i>t</i>	
a-a	123, 318	l-r	331, 336, 358	
a-e	193, 292	l-ng	123	
a-o	317	ng-ng	336	
e-a	122	k-g	193	
i-e	193, 312	n-n	292, 317	
o-o	336	h-h	331	
o-a	331, 357	t-t	318, 357, 358	
o-e	123	m-m	317, 318	
u-e	292	m-mw	312	
u-i	358	f-v	122, 193, 292	
l-l	123, 312			

Identical:

Terminal abrasion . . . 318

Consonant mutation:

Terminal abrasion . . . 336

Terminal abrasion 193, 292, 317, 318, 336

Frontal accretion 312

Terminal accretion 122, 331, 336, 357

Metathesis 193

RUAVATU.

a-a	317	l-l	313
a-e	313	n-n	317
i-i	313	m-m	313, 317
u-u	317		

SAA.

POLYNESIAN 30
QUALITY 80

				a <i>a, e</i>		
			e <i>e</i>	o <i>o</i>		
	i <i>i</i>				u <i>u</i>	
ng <i>ng</i>				l <i>l, r, n</i>		
				n <i>n, ng</i>		m <i>m</i>
				h <i>s, t</i>		
				s <i>s</i>		
						v <i>w, h</i>
						f <i>h</i>
k—				t—, t, k		p <i>p</i>
a-a	200, 214, 217, 250, 291, 292, 294, 307, 309, 317, 318, 338, 339, 350, 352, 360	n-n	187, 259, 292, 317, 330			
a-e	292, 300, 313, 350	n-ng	351			
e-e	122, 187, 190, 318, 338	h-s	352			
i-i	200, 259, 273, 291, 300, 313, 329, 330, 350, 351, 352	h-t	338, 339			
o-o	187, 259, 309	s-s	251, 298, 351			
u-u	200, 273, 292, 294, 298, 317, 329, 330, 351, 358, 360	t-t	329			
l-l	307, 309, 339, 350	t—	217, 294, 318, 350, 352, 358			
l-r	200, 358	t-k	356			
l-n	313	m-m	200, 217, 313, 317, 318			
ng-ng	309, 350	v-w	291			
k—	214, 250, 251, 300, 338	v-h	307			
		f-h	122, 214, 259, 273, 292, 294, 329, 360			
		p-p	190, 250			

Identical 187, 190, 200, 298, 309, 317, 330, 358

Vowel identity 214, 217, 250

Consonant mutation:

Vowel identity 259, 273, 291, 292, 294, 307, 318, 329, 350, 352,
360

Frontal abrasion 217, 250, 351, 352, 358

Frontal accretion 298, 300

Terminal accretion 351, 358

Metathesis 351

SANTO.

POLYNESIAN 27
QUALITY 81

			a <i>a, e, i, o</i>	
		e <i>e, i</i>	o <i>o, a</i>	
	i <i>i, e, u</i>		u <i>u</i>	
		l <i>l, r</i>		
ng <i>n, m</i>		n <i>n,</i>	m <i>m</i>	
		h <i>s, —</i>		
		s <i>s</i>		
			v	
			f <i>v, w</i>	
			p <i>p</i>	
k <i>k</i>		t <i>t</i>		
a-a 199, 216, 217, 228, 292, 300, 312, 313, 318, 324, 356		l-r 305, 336, 355		
a-e 216, 253, 316, 324		ng-n 285, 336, 346		
a-i 217, 292		ng-m 199		
a-o 239, 302, 346, 352		k-k 300, 302, 305		
e-e 47		n-n 292, 343		
e-i 153, 318		h-s 47, 206, 278, 352		
i-i 47, 206, 300, 305, 312, 346, 352, 355		h— 255		
i-e 313		s-s 239		
i-u 305		t-t 47, 199, 216, 217, 302, 318, 324, 343, 346, 352, 355		
o-o 153, 206, 285, 336, 355, 356		m-m 216, 217, 253, 255, 312, 313, 316, 318, 324		
o-a 255		f-v 292		
u-u 216, 228, 239, 278, 292, 316, 343		f-w 206		
l-l 153, 228, 312, 313, 316		p-p 285		

Identical. 153, 228, 300, 312, 343, 355, 356

Consonant identity. . . . 216, 217, 239, 253, 302, 316, 318, 324

Vowel identity. 199

Consonant mutation:

Vowel identity. 47, 206, 292, 336

Terminal abrasion. . . . 278, 285

Terminal abrasion. . . . 278, 285

Frontal accretion. . . . 312

Terminal accretion. . . . 153, 239, 305, 313, 324, 336

POLYNESIAN	22
QUALITY	45

[illegible]

Identical:

Terminal abr. 190, 309, 356

Consonant identity . . 316, 317, 328, 337

Vowel identity 217, 306

Consonant mutation:

Terminal abr. 147

Terminal abrasion. 147, 190, 217, 239, 306,
309, 317, 318, 328, 356

Frontal accretion . . . 301

Terminal accretion. 250, 272, 335, 350

SAVO.

		a <i>a</i>	
	e <i>e</i> , <i>o</i>	o <i>o</i>	
	i <i>a</i> , <i>o</i>	u <i>u</i>	
ng <i>ng</i>		l <i>l</i>	
		n <i>n</i>	m <i>m</i>
		h	
		s <i>s</i> , <i>z</i>	
			v <i>v</i>
			f
	k <i>k</i> , <i>g</i>	t	p <i>p</i> , <i>v</i> , <i>b</i>
a-a 239, 250, 316, 328, 337		k-g 250	
e-e 190		n-n 328	
e-a 272		s-s 337	
i-o 305		s-z 239	
i-a 335		m-m 316, 328	
o-o 285		v-v 272	
u-u 239, 272, 316, 328		p-p 285	
l-l 272, 316		p-v 250	
ng-ng 285		p-b 190	
k-k 305			

SESAKE.

POLYNESIAN 57
QUALITY 76

					a <i>a, o, u</i>				
				e <i>e</i>	o <i>o</i>				
			i <i>i, e</i>			u <i>u, a, o</i>			
				l <i>l, r, nd</i>					
	ng <i>ng</i>			n <i>n</i>		m <i>m</i>			
				h <i>s, v</i>					
				s <i>s</i>					
						v <i>v, u</i>			
						f <i>f, v, p, w</i>			
						p <i>p, b, mb, v</i>			
	k <i>k, g, w</i>			t <i>nd, t</i>					
a-a	45, 147, 151, 162, 169, 200, 209, 214, 215, 217, 239, 246, 258, 260, 270, 272, 274, 278, 291, 292, 294, 300, 301, 307, 310, 312, 317, 318, 322, 324, 335, 337, 338, 339, 342, 350, 352, 356			ng-ng	151, 209, 246, 274, 285, 336, 350				
a-o	203			k-k	151, 194, 214, 251, 258, 300, 301, 338, 361				
a-u	307			k-g	169				
e-e	151, 153, 318, 338			k-w	305				
i-i	149, 169, 194, 200, 206, 215, 270, 285, 291, 298, 300, 305, 312, 329, 330, 342, 350, 352			n-n	169, 296, 317, 330, 342				
i-e	305			h-s	206, 215, 278, 338, 339, 352				
o-o	153, 206, 285, 296, 336, 356, 357			h-v	169				
u-u	151, 162, 200, 212, 239, 246, 258, 270, 272, 278, 292, 294, 296, 298, 301, 317, 330, 335, 358			s-s	45, 203, 239, 251, 298, 337, 342				
u-a	329			t-t	162, 217, 258, 270, 294, 318, 324, 352, 356, 357, 358				
u-o	194			t-nd	209, 329, 350				
l-l	153, 212, 257, 305, 307, 310, 312, 339, 350			m-m	158, 200, 217, 257, 258, 312, 317, 318, 322, 324, 343				
l-r	194, 200, 203, 260, 322, 335			v-v	307				
l-nd	336			v-u	310				
				f-f	296				
				f-v	147, 214, 246, 292, 294				
				f-p	215				
				f-w	206				
				p-p	151				
				p-b	361				
				p-mb	285				
				p-v	45				

Identical 151, 153, 194, 200, 212, 217, 239, 258, 270, 296, 300, 301, 312, 317, 318, 322, 324, 330, 342, 356, 358

Terminal abrasion . . . 357

Consonant identity . . . 203, 239, 257, 307

Vowel identity 158, 162, 291, 336

Consonant mutation:

Vowel identity 169, 206, 209, 214, 215, 246, 278, 285, 292, 294, 338, 339, 350, 352

Terminal abrasion 147, 274, 310, 357

Frontal abrasion 329

Frontal accretion 158, 162, 260, 274, 291, 298, 310, 339

Terminal accretion 194, 239

TANNA.

POLYNESIAN 37
QUALITY 29

				a a, e, i	
		e e, i		o e, u	
	i i, a, e			u u, a, e, i	
		l r			
ng ng, n		n n		m m	
		h t			
		s s, r			
				v u	
				f f, v, k	
k k, g, y		t t, s, h		p p, b, m	
a-a	150, 173, 216, 218, 238, 249, 256, 274, 293, 317, 322, 334, 337, 352, 360	ng-n	285		
a-e	147, 340, 350	k-k	150, 194, 258, 361		
a-i	217, 313, 340	k-g	306		
e-e	173, 240, 290	k-y	251		
e-i	147	n-n	147, 317, 321		
i-i	150, 194, 200, 274, 312, 313, 319, 321, 350, 352	h-t	340		
i-e	290	s-s	251		
i-a	319	s-r	337		
o-e	285	t-t	150, 168, 274, 306		
o-u	150	t-s	207		
u-u	168, 173, 194, 216, 238, 240, 247, 273, 317, 321, 358	t-h	258		
u-a	168	m-m	200, 258, 274, 317, 321, 322, 340		
u-e	306	v-u	291		
u-i	334	f-f	293		
l-r	194, 200, 322	f-v	147, 290		
ng-ng	274	f-k	273		
		p-p	173, 361		
		p-b	285		
		p-m	207		

Identical 194, 274, 173, 293

Consonant identity . . . 150, 168, 313, 319, 334, 350

Consonant mutation:

Vowel identity 352

Terminal abrasion 147, 273, 306

Frontal abrasion 321

Frontal accretion 147, 150, 273, 291, 306, 340, 350, 358

Terminal accretion . . . 200, 317, 321, 340

TANGOAN SANTO.

			a <i>a</i>						
			e <i>e, o</i>			o <i>o</i>			
		i <i>i</i>					u <i>u</i>		
			l <i>l, r</i>						
ng <i>ng</i>			n <i>n</i>					m <i>n</i>	
			h <i>s, ts</i>						
			s <i>s</i>						
								v	
								f <i>b, p, th</i>	
								p <i>b</i>	
		k <i>k, v</i>		t <i>t</i>					
a-a	147, 148, 193, 209, 217, 239, 278, 302, 312, 316, 338, 340, 346		k-v	194					
e-e	338		n-n	147					
e-o	247		h-s	206, 278, 338					
i-i	193, 194, 206, 302, 312, 346		h-ts	340					
o-o	147, 206		s-s	239					
u-u	148, 194, 239, 247, 278, 316, 358		t-t	148, 209, 217, 247, 302, 346, 358					
l-l	312, 316		m-n	312, 316, 340					
l-r	194, 358		f-b	193, 206					
ng-ng	209, 346		f-p	148					
k-k	193, 302, 338		f-th	147					
			p-b	247					

UEA.

a-a	274	ng-ng	274
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UGI.

POLYNESIAN 8
QUALITY 75

a-a	214, 250, 292, 300, 317, 318	n-l	259
e-e	318	t-t	357
i-i	259, 300	t—	318
o-o	259, 357	m-m	317
u-u	292, 317	f-v	292
k—	214, 250	f-h	214, 259, 292
n-n	292, 317	p-p	250

ULAWA.

POLYNESIAN 28
QUALITY 77

			a <i>a</i>		
		e <i>e</i> , <i>a</i>	o <i>o</i>		
	i <i>i</i>			u <i>u</i>	
		l <i>l</i> , <i>r</i> , <i>n</i>			
ng <i>ng</i>		n <i>n</i> , <i>ng</i>		m <i>m</i>	
		h <i>s</i>			
		s <i>s</i>			
				v <i>w</i>	
				f <i>h</i>	
k —		t <i>t</i> , —		p <i>p</i>	
a-a	200, 214, 217, 239, 250, 291, 294, 300, 309, 312, 313, 317, 318, 324, 350, 352, 360	ng-ng	309, 343, 350		
e-e	190, 318	k —	214, 250, 251, 300, 301		
e-a	122	n-n	259, 317, 330		
i-i	200, 259, 291, 300, 312, 313, 329, 330, 350, 351, 352	n-ng	351		
o-o	259, 309	h-s	352		
u-u	200, 239, 294, 298, 317, 329, 330, 343, 351, 360	s-s	239, 251, 298, 351		
l-l	309, 312, 350	t-t	329, 343		
l-r	200	t —	217, 294, 318, 324, 350, 352		
l-n	313	m-m	200, 217, 312, 313, 317, 318, 324		
		v-w	291		
		f-h	122, 214, 259, 294, 329, 360		
		p-p	190, 250		

Identical 190, 200, 250, 309, 312, 317, 330, 343

Vowel identity 214, 217, 239, 294, 313, 318, 324, 350

Consonant mutation:

Vowel identity 259, 291, 300, 329, 360

Frontal abrasion 217, 250, 350, 351, 352

Frontal accretion 239, 294, 298

VANIKORO.

a-a	292	u-u	273, 292
a-e	292	f-f	292
i-i	273	f-p	273

VATURANGA.

POLYNESIAN	39
QUALITY	76

		a a	
	e e, a	o o, a	
	i i, a, o	u u, o	
ng ng		l l, r, k, —	m m
		n n, l	
		h s, h	
		s s	
			v
			f v, h, ng
k k, h, ng		t t, nd	p b, mb, v
a-a	123, 147, 200, 214, 215, 217, 258, 278, 284, 294, 309, 313, 316, 317, 318, 324, 328, 338, 346, 352, 360	ng-ng	285, 309, 336, 346
e-e	122, 190, 257, 318, 338	k-k	305, 338
e-a	272	k-ng	251, 306
i-i	200, 206, 215, 259, 285, 298, 313, 329, 330, 346, 352	k-h	258, 301
i-a	305	n-n	147, 201, 317, 328, 330
i-o	305	n-l	259
o-o	123, 147, 201, 206, 259, 285, 309, 336	h-s	206, 215, 338, 352
o-a	257	h-h	278
u-u	200, 258, 272, 278, 284, 294, 298, 306, 316, 317, 328, 329, 330, 358, 360	s-s	251, 298
u-o	306	t-t	217, 258, 294, 306, 318, 324, 346, 352, 358
l-l	123, 284, 309, 316	t-nd	329
l-r	200, 272, 305, 335, 336	m-m	200, 217, 258, 313, 316, 317, 318, 324, 328
l-k	313	f-v	122, 147, 206, 214, 259, 272, 294, 329
l—	123	f-h	201
		f-ng	215
		p-b	190
		p-mb	285
		p-v	284

Identical 200, 214, 217, 278, 298, 309, 317, 318, 324, 328,
330, 346, 358

Consonant identity 257

Vowel identity 123, 215, 258, 259, 313

Consonant mutation:

Vowel identity 147, 190, 201, 206, 284, 285, 294, 329, 338, 352, 360

Terminal abrasion 214

Terminal accretion 258, 316, 336

VOLOW.

POLYNESIAN 38
QUALITY 37

		a <i>a, e, i, o</i>	
	e <i>e</i>	o <i>o</i>	
	i <i>i, e</i>	u <i>i, e, o</i>	
ng <i>ng, n</i>		l <i>l, r, g</i>	
		n <i>n, ng</i>	m <i>m, mw</i>
		h <i>h</i>	
		s <i>h</i>	
			v <i>mb, w</i>
			f <i>v</i>
k <i>g, ng</i>		t <i>t, nd, m</i>	p <i>b, w, nggmbw</i>
a-a 147, 214, 217, 239, 294, 318, 309, 337, 338, 339, 357		k-g 251, 300, 301, 306	
a-e 268, 290, 316, 317, 322, 324, 328, 350		k-ng 357	
a-i 350		n-n 147, 317, 328	
a-o 307		n-ng 151, 351	
e-e 122, 151, 190		h-h 338, 339, 351	
i-i 154, 351		s-h 239, 251, 337	
i-e 290, 300, 312		t-t 268, 294, 306, 324, 358	
o-o 285, 336, 357		t-nd 350	
u-e 316		t-m 217	
u-i 212, 306, 358		m-m 217, 312, 316, 317, 322, 324, 328	
u-o 239, 284		m-mw 316	
l-l 154, 212, 284, 307, 309, 312, 316, 339, 350		v-mb 291	
l-r 268, 322, 335, 336		v-w 307	
l-g 358		f-v 122, 147, 214, 290, 294	
ng-ng 154, 309, 336, 350		p-b 190	
ng-n 285		p-w 284	
		p-nggmbw 151, 285	

Identical. 214, 324

Terminal abrasion. . . 154, 309, 318, 336, 339

Consonant identity. . . 212, 268, 317, 328

Vowel identity. 357

Consonant mutation:

Terminal abrasion. . . 190, 285

Terminal abrasion. . . . 151, 154, 190, 214, 268, 284, 285, 290, 294, 300,
306, 309, 316, 317, 318, 328, 336, 338, 339, 351

Frontal abrasion. 351

Frontal accretion. 290, 301, 339

Terminal accretion. . . . 122, 212, 312, 350, 351

VURAS.

POLYNESIAN 28

QUALITY 40

			a <i>a, e, o, u</i>	
		e <i>e</i>	o <i>o, e</i>	
	i <i>e</i>		u <i>u, o</i>	
		l <i>l, r, nd, ng</i>		
ng <i>ng, n</i>		n <i>n</i>	m <i>m</i>	
		h <i>s</i>		
		s <i>s</i>		
			v <i>w</i>	
			f <i>v</i>	
k <i>g, w</i>		t <i>t, m</i>	p <i>w, kpw</i>	
a-a 123, 147, 214, 217, 309, 317, 318, 328, 339	ng-ng 309, 336, 346			
a-e 239, 316, 324, 346	ng-n 285			
a-o 292, 307	k-g 251, 301			
a-u 307	k-w 306			
e-e 122	n-n 147, 292, 317, 328, 343			
i-e 312	h-s 339			
o-o 147, 285, 336, 356, 357	s-s 239, 251			
o-e 123	t-t 306, 318, 324, 343, 346, 356, 358			
u-u 306, 316, 343, 358	t-m 217			
u-o 284, 292	m-m 217, 312, 316, 317, 318, 324, 328			
l-l 123, 284, 307, 309, 312, 316, 339	v-w 307			
l-r 336, 358	f-v 122, 147, 214, 292			
l-nd 335	p-w 284			
l-ng 123	p-kpw 285			

Identical. 214, 285, 318, 358

Terminal abrasion. . . 309, 317, 328, 356

Consonant identity. . . 239, 316

Consonant mutation:

Vowel identity. 147

Terminal abrasion. . . 357

Terminal abrasion. . . . 214, 217, 239, 284, 306, 312, 316, 317, 318, 328,
336, 339, 346, 356

Frontal accretion. 123, 301, 312, 339

Terminal accretion. . . . 122, 324, 336

WANGO.

POLYNESIAN 36
QUALITY 75

			a <i>a</i>						
				e <i>e</i>		o <i>o</i> , <i>a</i>			
		i <i>i</i> , <i>u</i>				u <i>u</i> , <i>o</i>			
			l <i>l</i> , <i>r</i>						
ng <i>ng</i>			n <i>n</i> , <i>ng</i>			m <i>m</i>			
			h <i>s</i> , <i>t</i>						
			s <i>s</i> , <i>t</i>						
						v <i>h</i>			
						f <i>h</i>			
		k <i>g</i> , —			t <i>t</i> , <i>k</i> , <i>g</i> , —	p <i>b</i> , <i>h</i>			
a-a	214, 215, 217, 239, 250, 284, 300, 397, 309, 312, 313, 317, 318, 335, 337, 339, 342, 348, 350, 352, 357, 360		k—	214, 250, 300, 305					
e-e	122, 190, 257, 318		k-g	251					
i-i	215, 259, 273, 298, 300, 305, 312, 313, 329, 330, 342, 348, 350, 352		n-n	317, 328, 330, 342					
i-u	305		n-ng	351					
o-o	259, 309, 357		h-s	215, 352					
o-a	257		h-t	339					
u-u	239, 273, 284, 298, 317, 329, 330, 335, 351, 358, 360		s-s	239, 251, 298, 342, 351					
u-o	328		s-t	337					
l-l	309, 348		t-t	348					
l-r	257, 259, 284, 305, 307, 312, 313, 335, 339, 350, 358		t-k	350, 356					
ng-ng	309, 350		t-g	329					
			t—	217, 318, 352, 358					
			m-m	217, 257, 312, 313, 317, 318, 328					
			v-h	307					
			f-h	122, 214, 215, 259, 273, 329, 360					
			p-b	190, 250					
			p-h	284					

Identical. 239, 250, 298, 309, 312, 313, 317, 330, 342, 348

Consonant identity. 257, 328

Vowel identity. 214, 217, 250, 259, 300, 318, 339, 350, 352, 357

Consonant mutation:

Vowel identity. 190, 215, 273, 284, 307, 360

Frontal abrasion. 217, 250, 305, 351, 352, 358

Frontal accretion. 298

Terminal accretion. 335, 351

In our next series of tables we present the various observed mutations reduced to the Proto-Samoan original. The collation of the liquid semivowel is designedly incomplete for the reason that we lack sufficient and sufficiently positive data upon the occurrence of the *r* grasseyé and its reproduction in terms of *l* and *r*. Under the *l-r* head, therefore, we note only anomalous changes.

A

<i>a-e</i>	Alo Teqel	Eromanga	Leon	Moánus	Pala
	Ambrym	Fagani	Lifu	Mosin	Retan
	Aneityum	Gog	Lo	Mota	Saa
	Arag	Iai	Maewo	Motlav	Santo
	Baki	King	Makura	Nifilole	Sasar
	Baravon	Lakon	Malekula	Norbarbar	Tanna
	Bierian	Lamassa	Marina	Omba	Vanikoro
	Buka	Lambell	Matupit	Paama	Volow
	Deni	Laur	Merlav	Pak	Vuras

<i>a-i</i>	Ambrym	Eromanga	Lo	Mosin	Santo
	Aneityum	Fagani	Malekula	Mota	Tanna
	Baki	King	Malo	Motlav	Volow
	Belaga	Lakon	Moánus	Norbarbar	

<i>a-o</i>	Alo Teqel	Eromanga	Lo	Motlav	Retan
	Aneityum	Fagani	Maewo	New Georgia	Santo
	Arag	Iai	Malekula	Nggela	Sasar
	Baki	King	Malo	Nifilole	Sesake
	Bierian	Lambell	Merlav	Norbarbar	Volow
	Bugotu	Leon	Mosin	Pak	Vuras

<i>a-u</i>	Alo Teqel	Buka	King	Mota	Nifilole
	Ambrym	Deni	Lamassa	Motlav	Omba
	Aneityum	Dufaure Id	Lambell	Natalava	Pak
	Baki	Epi	Laur	New Georgia	Sasar
	Bierian	Eromanga	Mosin	Nggela	Sesake

<i>a-ai</i>	Belaga	Bugotu	Nggela		
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E

<i>e-a</i>	Ambrym	Bugotu	Lakon	Marina	Nifilole
	Aneityum	Buka	Lamassa	Merlav	Pala
	Arag	Duke of York	Lambell	Mota	Retan
	Baki	Epi	Laur	Motlav	Savo
	Baravon	Fagani	Lo	Motu	Ulawa
	Bauro	Kabakada	Malo	Nggao	Vaturanga
	Bierian	King			

<i>e-i</i>	Aneityum	Brierly Id	Lifu	Malo	Nggela
	Arag	King	Lo	Moánus	Pak
	Baki	Laur	Maewo	Mota	Santo
	Belaga	Leon	Malekula	Motu	Tanna
	Bierian				

<i>e-o</i>	Baki	Gog	Lambell	Malo	Pala
	Buka	King	Laur	Motu	Tangoan Santo
	Epi	Lamassa			

<i>e-u</i>	Alo Teqel	Pak	Sasar		
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e-oi

Mota

e-ou

Malekula

I

i-aAneityum
BukaMota
Nguna

Savo

Tanna

Vaturanga

i-eAlo Teqel
Aneityum
Bougainville
Buka
Eromanga
FaganiGog
Kabakada
King
Lakon
Lamassa
MalekulaMalo
Mosin
Mota
Motlav
Motu
New GeorgiaNggao
Norbarbar
Pak
Pala
RetanSanto
Sesake
Tanna
Volow
Vuras**i-o**Aneityum
BakiEromanga
MotaMotu
New Georgia

Savo

Vaturanga

i-uBaki
Baravon
Bierian
Duke of York
FaganiGog
Kabadi
Kalil
King
LamassaLambell
Lo
Maewo
Makura
MalekulaMalo
Merlav
Moánus
Mota
MotuNggao
Nguna
Pala
Santo
Wango**i-ei**

Motu

O

o-aBaravon
Bugotu
BukaEpi
Fagani
KingLakon
Matupit
MotaNorbarbar
Pala
RetanSanto
Vaturanga
Wango**o-e**Alo Teqel
Baravon
MosinMotlav
NorbarbarPak
PalaRetan
SasarTanna
Vuras**o-i**Aneityum
BakiKing
LaurMalekula
MaloMota
NggaoNorbarbar
Paama**o-u**Ambrym
Aneityum
Baravon
BukaDuke of York
Kabakada
Kalil
KingLamassa
Lambell
LaurMalekula
Matupit
MotuNguna
Pala
Tanna**o-ai**

Mota

o-ia

Motu

U

u-aAmbrym
Buka
Duke of YorkGog
LambellMalo
MerlavMota
MotuSesake
Tanna**u-e**Alo Teqel
AneityumEromanga
MalekulaMalo
MotaOmba
RetanTanna
Volow

u-i	Alo Teqel Ambrym Aneityum Arag Baki Bierian	Bululaha Epi Gog Guadalcanar King Lamassa	Lambell Laur Lo Maewo Makura Malekula	Malo Merlav Mota Motlav Nifilole Norbarbar	Paama Pala Retan Sasar Tanna Volow
u-o	Ambrym Aneityum Arag Bugotu Buka Duke of York	Eromanga Gog Iai Lamassa Lambell Laur	Leon Malo Mosin Mota Motlav	Motu New Georgia Nifilole Pak Sasar	Sesake Vaturanga Volow Vuras Wango
u-au	Lakon				
u-h	Laur	Pala			
u-p	Aneityum				
u-v	Aneityum	Mota	Omba		
ae-e	Nggela		AE		
ae-i	Aneityum		AI		
ai-e	Eromanga Lo	Malekula	Motlav	Norbarbar	Pak
au-ai	Arag	Murray Id	New Georgia	Nggela	Ulawa
au-e	Norbarbar				
au-o	Malekula	Mosin	Motlav	Pak	Vuras
au-u	Norbarbar				
l-t	Alo Teqel Baki	Bugotu	Merlav	Pak	Sasar
l-nd	Buka	Gog	Maewo	Merlav	Norbarbar
l-j	Aneityum	Baki (note 312)			
l-dr	Lakon				
l-m	Bierian				
l-th	Bugotu				
l-nl	Lamassa				

l-k	Aneityum	Nggao	Vaturanga (note 312)		
l-h	Eromanga	Lo			
l-n	Dufaure Id Mosin	Mota Nengone	Pala	Saa	Ulaw
l-mj	Baki				
l-ng	Alo Teqel Gog Lakon	Merlav Mosin	Mota Motlav	Pak Retan	Sasar Vuras
l—	Baravon Bierian	Guadalcanar	Motu	Paama	Vaturanga

NG

ng-ng	Alite Alo Teqel Ambrym Arag Baki Baravon Belaga Bierian Bougainville Bugotu Buka Bululaha	Duke of York Eromanga Fagani Gog Guadalcanar Kabakada King Lakon Lamassa Lambell Laur Lemaroro	Lo Maewo Malekula Malo Marina Matupit Merlav Moánus Mosin Mota Motlav Nengone	New Georgia Nggao Nggela Nguna Norbarbar Omba Paama Pak Raluana Retan Saa	Sasar Savo Sesake Tangoan Santo Tanna Uea Ulaw Vaturanga Volow Vuras Wango
ng-n	Alo Teqel Baki Buka Duke of York Gog Kabadi	King Lakon Lamassa Lambell Laur Lo	Maewo Makura Malekula Malo Moánus Mota	Motlav Motu Nguna Norbarbar Omba Pak	Pala Santo Sasar Tanna Volow Vuras
ng-nj	Aneityum				
ng-nd	Natalava				
ng-g	Aneityum Baki	Eromanga Lo	Makura Malekula	Mota	Nggela
ng-m	Bierian	Malekula	Malo	Mota	Santo
ng—	Dufaure Id	Motu			

K

k-k	Ambrym Aneityum Baki Baravon Bierian Bougainville Bugotu Deni	Duke of York Epi Eromanga Fagani Iai King Lamassa Lambell	Lifu Maewo Makura Malekula Malo Merlav Moánus	Motu Murray Id Nengone New Georgia Nggao Nggela Nguna	Nifilole Santo Savo Sesake Tangoan Santo Tanna Vaturanga
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k-g	Alo Teqel Ambrym Aneityum Arag Belaga Bugotu Fagani Gog	Lakon Laur Leon Lo Maewo Malekula Malo	Marina Merlav Mosin Mota Motlav Motu Murray Id	Nggao Nggela Norbarbar Omba Pak Pala Retan	Sasar Savo Sesake Tanna Volow Vuras Wango
k-kh	Malekula	Tangoan Santo			
k-ng	Alite Aneityum	Mosin Mota	Motlav Pak	Sasar Vaturanga	Volow
k-ngg	Eromanga	Malekula			
k-h	Ambrym	Malekula	New Georgia	Vaturanga	
k-m	Motu				
k-mk	Baki				
k-v	Malo	Tangoan Santo			
k-w	Alo Teqel Lakon Maewo	Merlav Mosin Mota	Norbarbar Omba	Pak Sasar	Sesake Vuras
k-y	Tanna				
k—	Alite Ambrym Baravon Belaga	Buka Bululaha Duke of York Malekula	Malo Matupit Moanus Motu	Nengone Norbarbar Pala Saa	Ugi Ulawa Wango
N					
n-n	Alo Teqel Ambrym Aneityum Arag Baki Baravon Belaga Brierly Id Bugotu Buka Bululaha Duke of York Epi	Eromanga Fagani Gog Guadalcanar Iai Kabadi Kabakada Kalil King Lakon Lamassa Lambell Laur	Leon Lifu Lo Maewo Makura Malekula Malo Marina Matupit Meli Merlav Moanus Mosin	Mota Motlav Motu Nengone Nggao Nggela Nguna Nifilole Norbarbar Omba Pak Retan Ruavatu	Saa Santo Sasar Savo Sesake Tangoan Santo Tanna Ugi Ulawa Vaturanga Volow Vuras Wango
n-ng	Bugotu Fagani Gog King	Lamassa Lambell Laur Lo	Merlav Mota Motlav	Nggela Pala Saa	Ulawa Volow Wango
n-gn	Bugotu	Buka			
n-ny	Aneityum	Moanus			

n-l	Alite Arag Bierian	Bougainville Buka Fagani	Maewo Marina Mota	Motlav Nggela	Ugi Vaturanga
n-m	New Georgia	Nggao			
n-r	Malekula				
n-t	Alo Teqel				
n—	Marina				
H					
h-h	Ambrym Arag Belaga Bierian	Bugotu Deni Epi Eromanga	Lakon Makura Motlav Nggao	Nggela Norbarbar Omba	Retan Vaturanga Volow
h-s	Alite Bauro Brierly Id Buka Bululaha Eromanga Fagani	Gog Kalil King Lamassa Lambell Laur Maewo	Malekula Malo Marina Merlav Moánus Mosin	Mota Nguna Pak Pala Saa Santo	Sesake Tangoan Santo Ulawa Vaturanga Vuras Wango
h-t	Alite	Saa	Tanna	Wango	
h-d	Motu				
h-th	Belaga	Guadalcanar			
h-ts	Tangoan Santo				
h-j	Aneityum	Lo	Malekula		
h-f	Aneityum				
h-v	Sesake				
h—	Ambrym Baki	Baravon	Deni	Duke of York	Santo
S					
s-s	Alite Alo Teqel Aneityum Belaga Bierian Brumer Id Buka Bululaha Epi Eromanga	Fagani Gog Guadalcanar King Lakon Lamassa Lambell Laur Leon	Maewo Mai Malekula Malo Merlav Moánus Mosin Mota Nengone	New Georgia Nggao Nggela Nifilole Norbarbar Paama Pak Saa Santo	Sasar Savo Sesake Tangoan Santo Tanna Ulawa Vaturanga Vuras Wango
s-z	Savo				
s-sh	Brumer Id				

s-h	Ambrym Aneityum Arag	Bierian Bugotu Buka	Lakon Lo Motlav	Motu Nggao Nggela	Norbarbar Omba Volow
s-d	Motu				
s-t	Alite	Wango			
s-k	Baki				
s-th	Belaga				
s-y	Baki				
s-r	Tanna (note 239)				
s-w	Duke of York.				
s—	Alite	Santo			
T					
t-t	Alo Teqel Ambrym Aneityum Arag Baki Baravon Belaga Bierian Bougainville Brierly Id Brumer Id Bugotu Buka	Bululaha Deni Duke of York Epi Eromanga Fagani Gog Iai Kalil King Lakon Lamassa Lambell	Laur Lo Maewo Makura Malekula Malo Marina Matupit Merlav Moánus Mosin Mota Motlav	Motu Nengone New Georgia Nggao Nggela Nguna Nifilole Norbarbar Omba Pak Raluana Retan	Saa Santo Sasar Sesake Tangoan Santo Tanna Ugi Ulawa Vaturanga Volow Vuras Wango
t-d	Arag Bierian	Buka Eromanga	King Kalil	Malo	Pala
t-nd	Baravon Bougainville Bugotu	Lo Maewo	Motlav Nggela	Norbarbar Sesake	Vaturanga Volow
t-dr	Ambrym	Baki			
t-ndr	Moánus				
t-th	Aneityum	Bugotu			
t-s	Ambrym Aneityum Bierian	Buka Eromanga	Malo Marina	Mota New Georgia	Paama Tanna
t-h	Arag	Bierian	Tanna		
t-j	Baki	Malekula			
t-r	Lemaroro	Malekula	Moánus	Mota (note 258)	

t-n	King	Lamassa	Lambell	Laur	
t-m	Alite Alo Teqel Gog	Lakon Merlav Mosin	Motlav New Georgia Norbarbar	Omba Pak (note 217)	Sasar Volow Vuras
t-w	Fagani				
t-k	Baravon Brierly Id Deni	Fagani Iai Kabadi	King Lamassa Lambell	Lifu Nggela	Saa Wango
t-g	Wango				
t—	Alite Alo Teqel Bauro	Bululaha Fagani Leon	Pak Saa	Sasar Ugi	Ulaw Wango

M

m-m	Alite Alo Teqel Ambrym Aneityum Arag Baki Baravon Belaga Bierian Brierly Id Brumer Id Bugotu Buka Bululaha	Deni Duke of York Epi Eromanga Fagani Gog Guadalcanar Iai Kabakada Kalil King Lakon Lamassa Lambell	Laur Leon Lifu Lo Maewo Makura Malanta Malekula Malo Marina Matupit Merlav Moanus Mosin	Mota Motlav Motu New Georgia Nggao Nggela Nguna Ninilole Norbarbar Omba Pak Retan Ruavatu	Saa Santo Sasar Savo Sesake Tangoan Santo Tanna Ugi Ulaw Vaturanga Volow Vuras Wango
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m-mw	Merlav Mosin	Mota	Motlav	Retan	Volow
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m-n	Marina	Tangoan Santo (note 312)			
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m-ng	Alo Teqel	Lo			
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m-v	Nggela				
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m-r	Bugotu	Nggela			
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m-t	Malo				
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V

v-v	Baki Baravon Belaga	Gog Lo Malekula	Merlav Mota Nggela	Omba Savo	Sesake Vanua Lava
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v-f	Ambrym	Fagani (note 291)			
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v-b	Deni	Mai	Pala		
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v-mb	Bugotu	Maewo	Merlav	Motlav	Volow
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v-p	Aneityum Lo	Marina	Mota	Norbarbar	Vanua Lava
v-pw	Malekula				
v-h	Saa	Wango			
v-u	Alite Baki Bierian	Eromanga Malekula	Malo Moánus	Mota Pala	Sesake Tanna
v-w	Alo Teqel Ambrym Aneityum Arag Baravon	Bululaha Gog Leon Lo Malekula	Mosin Mota Motlav Nengone	Norbarbar Omba Pak Saa	Sasar Ulawa Volow Vuras
v-t	Marina				
v-ku	Alite				
v—	Arag	Maewo			
F					
f-v	Alite Alo Teqel Ambrym Arag Baki Baravon Belaga Bierian Bugotu Deni	Epi Eromanga Fagani Gog Guadalcanar Iai Kabadi King Lakon Lamassa	Laur Leon Lo Maewo Makura Malekula Malo Marina Merlav Mosin	Mota Motlav Motu Nggela Nguna Nifilole Norbarbar Omba Pak	Retan Santo Sasar Sesake Tanna Ugi Vaturanga Volow Vuras
f-f	Bierian Fagani Lamassa	Malekula Meli	Nggao Nggela	Nguna Sesake	Tanna Vanikoro
f-p	Aneityum Baravon Brierly Id	Eromanga King Lamassa	Lambell Malekula Matupit	Moánus Nifilole Sesake	Tangoan Santo Vanikoro
f-b	Ambrym Baki	Bierian Duke of York	Eromanga Malekula	Malo	Tangoan Santo
f-mb	Moánus	Nggela			
f-mbw	Malekula				
f-k	Aneityum	Tanna			
f-kr	Nggao				
f-n	Nifilole				
f-ng	Nggao	Vaturanga			

f-s	Eromanga	Pala			
f-th	Tangoan Santo				
f-t	Moánu	Mota			
f-h	Ambrym Aneityum Bougainville Buka	Bululaha Kalil Lambell Laur	Lo Motu Paama	Pala Saa Ugi	Ulaw Vaturanga Wango
f-u	Aneityum	Malo	Pala		
f-w	Alo Teqel Aneityum Arag Baravon Duke of York Gog	Kabakada King Lakon Lamassa Lo Maewo	Matupit Merlav Mosin Mota Motlav Nengone	Nguna Nifilole Norbarbar Omba Raluana	Santo Sasar Sesake Ugi Ulaw
f—	Duke of York Iai	Lamassa Lifu	Maewo Makura	Malekula Moánu	Nengone
P					
p-p	Alo Teqel Aneityum Arag Baravon Belaga Bougainville	Bugotu Bululaha Eromanga Fagani Lakon Lifu	Lo Malekula Marina Moánu Mota Motu	Nengone New Georgia Norbarbar Pak Saa Santo	Sasar Savo Sesake Tanna Ugi Ulaw
p-m^p	Eromanga				
p-b	Alite Baki Baravon Bierian Brierly Id Buka Duke of York	Fagani Gog Guadalcanar Kabakada King Lamassa Lambell	Laur Maewo Malekula Malo Matupit Merlav Motlav	Motu New Georgia Nggela Norbarbar Omba Pala Savo	Sesake Tangoan Santo Tanna Vaturanga Volow Wango
p-m^b	Baki Baravon Belaga Bugotu Buka	Deni Epi Gog King	Lamassa Lambell Laur Malekula	Merlav Moánu Nggao Nggela	Norbarbar Omba Sesake Vaturanga
p-m	Bierian	Lamassa	Tanna (note 207)		
p-k^{pw}	Arag Gog	Lakon Lo	Maewo Mota	Motlav Norbarbar	Volow Vuras
p-f	Fagani				
p-bu	Malo				
p-l	Aneityum				

p-v	Arag Belaga Buka	Epi Gog Lakon	Malo Marina Merlav	Moánuš Mota Nggela	Savo Sesake Vaturanga
p-w	Buka Maewo	Mosin	Motlav	Volow	Vuras
p-h	Wango				
p—	Ambrym				

We shall next subject these Melanesian mutations to a comparison with those which have been observed in the Polynesian family, as set forth in the tables beginning on page 50, confining our attention to the consonants.

L

The following changes are common to the two families: **L** to *t*, to *nd*, to *dr*, to *n*, these in the same series; to *ng* in the palatal series; to extinction. Of these the most widespread in the Polynesian family are the extinction and the *n*-change, the others being found in but one language apiece. In the Melanesian family the most widely extended are the extinction and the changes to *n* and *ng*.

Distinctly Melanesian mutations are these: **L** to *j*, to *m*, to *th*, to *nl*, to *k*, to *h*, to *mj*. Of these, **l-j** identifies itself with the **l-t** mutation, as will appear in the examination of **T**; and with this the Baki *mj* is probably associable as a reinforced *j*. Similarly the **l-th** of Bugotu is seen to belong to the **l-t** mutation when we observe the **t-th** mutation in that speech. Lamassa *nl* is a reinforced *l*.

The purely Melanesian mutations, then, are **l** to *m*, to *k*, to *h*.

NG

Common to the two families are: **NG** to *n*, to *k*, to extinction, the more extended in Polynesia being the first and the third, the *k*-change occurring only in the eastern Marquesas and in Viti. The *k*-mutation in Melanesia occurs but once, in Aneityum. The change to *n* is very frequent. Extinction is met with only in Torres Straits, at Dufaure Island and Motu, in the latter speech forming one of the points of great resemblance with Tahiti.

Distinctively Melanesian are: **NG** to *nj*, to *nd*, to *g*, to *m*. The *g*-mutation is easily seen to be a variant upon the *k*-change; it occurs in seven languages of the New Hebrides and in one of the Solomons.

The purely Melanesian mutations are **NG** to *m*, to *nj*, to *nd*.

K

Common to the two families are: **K** to *g*, to *ng*, to *ngg*, to extinction. The extinction is the most widely extended in Polynesia, being the rule in Hawaii, Tahiti, and in Samoa where it is so recent that the failure of vowels wholly to glide over the gap is represented by ' as an alphabetic character under the name of the catch. In Melanesia the most frequent is the *g*-mutation, and the extinction comes next in frequency.

Distinctively Melanesian mutations are: **K** to *kh*, to *mk*, to *h*, to *m*, to *v*, to *w*, to *y*. The *kh*-change is of the same order as the *g*-mutation, a further move in the same series. The *mk* of Baki is but a prefatory reinforcement.

The purely Melanesian mutations are: **K** to *h*, to *m*, to *v*, to *w*, to *y*.

N

Common to the two families are: **N** to *l*, to *r*, to *ng*. None is frequent in Polynesia; the *l*-mutation occurs in Nukuoro and Samoa and in but one word (*fonu-volu* 296), the *r*-mutation in but a single word in Rotumā and Tahiti. In Melanesia the mutations to *ng* and *l-r* are of wide extent.

Distinctively Melanesian mutations are: **N** to *gn*, to *ny*, to *m*, to *t*, to extinction. The first of these is probably an *ng*-form, for we recall that the early missionaries in the Pacific adopted that spelling in the case of Rarotogna for the indisputable Rarotonga.

The purely Melanesian mutations are: **N** to *ny*, to *m*, to *t*, to extinction.

H

The aspirate is difficult to trace in Polynesia. It is preserved as aspiration only in Niue, Tonga and Uvea; it appears as *s* in Rotumā and Viti, as *th* in Viti, and once as *w* in Hawaii. In Melanesia the aspiration is preserved quite widely, still more widely it has passed into the sibilant. The *th*-mutation appears in Belaga and Guadalcanar.

The purely Melanesian mutations are: **H** to *t*, to *d*, to *ts*, to *j*, to *f*, to *v*, to extinction.

S

Common to the two families are: **S** to *sh*, to *h*, to *th*, to extinction. In each family the most widely extended mutation is that from the sibilant to the aspiration.

Distinctively Melanesian mutations are: **S** to *z*, to *t*, to *d*, to *k*, to *r*, to *y*, to *w*.

T

Common to the two families are: **T** to *nd*, to *j*, to *th*, to *s*, to *k*, to extinction. In Polynesia the widest extent is measured by the *t-k* mutation. In Melanesia no one mutation has a marked frequency over several others.

Distinctively Melanesian mutations are: **T** to *d*, to *dr*, to *ndr*, to *h*, to *r*, to *n*, to *m*, to *w*, to *g*. The *d*-mutation is but a slight variant upon *t* itself, the *g*-mutation is a variant of the *k*-mutation.

The purely Melanesian mutations are: **T** to *dr*, to *ndr*, to *h*, to *r*, to *n*, to *m*, to *w*, to *g*.

M

In Polynesia the sole variation upon the labial nasal (**m-ng**) occurs in but a single word in Maori and Viti. Similarly in Melanesia this, the only common mutation, occurs in but a single word, not the same, however, as the Polynesian, in Alo Teqel and Lo.

Distinctively Melanesian mutations are: **M** to *mw*, to *n*, to *ng*, to *v*, to *r*, to *t*. The *mw*-change is scarcely to be classed as a mutation; it is a fashion in pronunciation which exists but in a restricted area of the Banks Group in the northern New Hebrides.

The purely Melanesian mutations are: **M** to *v*, to *r*, to *t*, to *n*, to *ng*.

V

Common to the two families are: **V** to *h*, to *w*. The latter alone has width of extent in either; *v-h* in Polynesia is found in but one word each in Niuē, Nukuoro, and Rotumā; and in Melanesia in but one word common to Saa and Wango.

Distinctively and wholly Melanesian are these mutations: **V** to *f*, to *b*, to *mb*, to *p*, to *pw*, to *u*, to *t*, to *ku*, to extinction.

F

Common to the two families are: **F** to *v*, to *h*, to *p*, to *b*, to *w*, to extinction. In Polynesia the widest extent marks the mutations to *h*, to *v*, and extinction; in Melanesia the order of frequency is *v*, *w*, *p*, *h*, extinction.

Distinctively Melanesian mutations are: **F** to *mb*, to *mbw*, to *k*, to *kr*, to *n*, to *ng*, to *s*, to *th*, to *t*, to *u*. Of these the *mb* and *mbw* are reducible to *p* (*b*), and the *u* to the common *w*.

The purely Melanesian mutations are: **F** to *k*, to *kr*, to *n*, to *ng*, to *s*, to *th*, to *t*.

P

Common to the two families are: **P** to *b* (*mb*), to *v*, to *h*, the last occurring in a single word common to Rotumā and Wango.

Distinctively and wholly Melanesian are: **P** to *mp*, to *m*, to *kpw*, to *f*, to *bu*, to *l*, to *w*, to extinction.

In a former paper in which I subjected the truly Polynesian languages to a similar detailed examination* it was pointed out that with certain exceptions noted the whole play of consonant mutation was a vertical or series matter:

One more preliminary statement: we have already said that for convenience we should enter upon our alphabetical conspectus the aspirate in the neighborhood of each of the three series. The convenience is this, that the aspirate is not palatal, not lingual, not labial, yet it lies as close to the one as to the other. We shall find it involved in all these changes, but it does not affect the rule which we are about to enunciate.

With the three exceptions noted (*s-v*, *ng-n*, *t-k*) the whole play of consonant mutation in Polynesian is a matter of vertical change. When a palatal changes it changes to another palatal, lingual modified remains lingual still, and labial remains labial even though its play of mutation carries it bodily into the vowel tract. But there is no horizontal movement, the labial under stress of change does not become palatal or lingual.

*"Samoan Phonetics in the Broader Relation," 17 Journal of the Polynesian Society, 217.

Now, vertical and horizontal are convenient terms to employ when the conspectus is before the eye, but as terms they have no real value in nature. That which it is of value to recognize is that which underlies this talk of vertical mutation, of labial, lingual, palatal invariability. That all-important underlying fact is this: no matter which of the three organs of speech mechanism this early speaker elected to employ for the expression of any given sense he does not change to another organ in case the result is not satisfactory, and this holds true with his remotest descendants wherever they may to-day be found. A novice at the trade of speaking, he may fumble the tool he has chosen to employ, but, being man and obstinately progressive, he sticks to the use of that same tool until he has learned the knack of it.

Accordingly we are to omit all such instances from our discussion of the Melanesian dealing with Polynesian material, for inasmuch as the mutations are found in Polynesia without exterior influence we can not prove that similar vertical mutations when found west of Viti are due in any degree to Melanesian influence.

The motion in each series is downward, excepting, of course, the three mutes which stand at the foot of each column and whose vertical motion can only be upward. Any exception, therefore, to this general downward motion of mutation calls for attention. There are but three such.

1. *K-y*. This is found only in Tanna *yasuk* (251) rat. As set forth in the note upon this item the matter is too obscure to serve as a satisfactory base for any deduction.

2. *S-r*. This is found only in *isā* (337) bad Tanna *ra*, a poor language from which to draw conclusions, particularly when the instance is unique.

3. *V-u*. This, with the *v-w*, which involves no more vital a distinction than an alphabetic symbol, is truly an upward motion on our charts of the sounds. But under the appearance there is a deeper principle. In the labial mutations we find such forms as *m-mw*, *p-pw*, *p-kpw*, *p-bu*, *v-ku*. If we are to interpret *m-mw*, for instance, as implying that *m* stands fast and at the same time moves upward, we are at once engaged with the phonetics of Sir Boyle Roche's bilocal bird. It becomes clear that the nucleus of all the labials is the vowel-semivowel *u-w*. In another place I comment upon the fact that the Melanesians have but recently begun to acquire command of their lips, not as yet facile. Thus the primordial semivowel persists with the consonant which is evolving therefrom, plumule and cotyledon breaking ground together to tell the tale of origins.

When these vertical mutations are omitted we shall find a considerable number remaining which we are justified in characterizing as Melanesian. They are the following, some effort having been made to assort them in reasonable groups.

1. Involving the aspiration:

k-h h-v v-h h-f f-h p-h

Superficially these are extra-serial mutations. If, however, my explanation be valid that the aspiration should be regarded as close to each series it will be permissible to regard it as the decay stage of each of these columns. The **f-h** change, too, is frequent in Polynesia.

K-h. This rests upon five instances, one triply and two doubly supported. In *mataku* (258) we find Ambrym *matehag* Malekula *metoh* Vaturanga *matahuni*. In *kafika* (193) Malekula Pangkumu has *havih*, two instances in one word. In *ika* (300) we find New Georgia *ihani* Malekula *na-ih*. In *kau* (301), noting the existence of a second stem *kai*, we find New Georgia *hai* Vaturanga *hai*. There are two widely separated foci of the mutation, Ambrym-Malekula, leeward islands in the central New Hebrides; Vaturanga and New Georgia, leeward in the central Solomons.

H-f. For this we have the single instance of *hala* (339) path Aneityum *ne-falaig*. The language is not very satisfactory and no great value may attach to this unique instance.

H-v. For this we have but a single example, Sesake *vinaga* (169); and in this there is uncertainty as to whether the Proto-Samoan was aspirate or sibilant.

V-h. This, the converse of the next preceding item, rests upon a single instance. In *lava* (307) we find Saa *laha* and Wango *raha*. The occurrence of this mutation is in the southern Solomons on either side of the straits which part San Cristoval and Malanta, not far from the northern **k-h** focus.

P-h. This rests upon the single instance of *vula* (284) in which we find Wango *hura*. This lies within the focus of the preceding item.

2. We have, then, two distinct and distant foci in which there is a tendency to reproduce certain of the Proto-Samoan consonants by the aspiration. The islands on which this occurs are large islands, with the possible exception of Ambrym, which is near the dividing line between the large and the small.

By far the larger group of the anomalies in mutation is that in which there is clearly a passage from one series to the next in order.

3. Lingual to labial:

L-m. This rests insufficiently upon the single instance of *malama* (322) light Bierian *mamama*.

N-m. This rests on a single doubtful instance, *anus* (351) to spit, in which we find Nggao *misu* and New Georgia *kamisu*. It occurs in the central islands of the Solomons.

T-m. If this be a valid mutation it rests upon but a solitary word, *tama* (217), which in Omba, Gog, Alite and New Georgia becomes *mama*, and in Merlav, Lakon, Pak, Sasar, Vuras, Mosin, Alo Teqel, Motlav, Volow and Norbarbar *mam*. The argument for this mutation will be found in the note upon this item in the systematic study of the data. This again has two foci: one, the Banks Group (omitting Mota), dipping down to Omba in the northern New Hebrides; the other in the central Solomons.

T-w. This change rests upon the single instance of the same *tama*, in which we find Fagani *wama*. As its immediate neighbors in the central Solomons, Ulawa, Wango, Saa and Bululaha, have the decapitated *ama* this may amount to no more than an obscure mouthing of the same form.

4. Labial to lingual:

M-r. This occurs in *malama* (322) light Bugotu Nggela *marara*, neighbors in the central Solomons.

M-n. For this we have no less than five examples, four Marina and one Tangoan Santo, our scanty vocabularies not allowing us to coordinate the two languages even in a single example. These are: *lima* (312) five Marina *lina*; *lima* (313) hand Marina *lina*; *manu* (317) bird Marina *nanu*; *mata* (324) eye Marina *nana*; *malū* (316) gentle Tangoan Santo *nalum*. This mutation is restricted to the island of Espiritu Santo in the northern and leeward New Hebrides, a large island.

M-t. Found in a single instance, *manifinifi* (254) thin Malo *tanivinivi*.

V-t. In *vai* (291) water, we note the doubtful case of Marina *tei*, an alternative with *pei*.

F-n. This rests upon the single instance *fua* (360) fruit Nifilole *nua*, and, as will be found in the systematic study of the data, a more consistent explanation is probable.

F-s. This is based on *nifo* (259) tooth Pala *ngise*, and *fafine* (290) woman Eromanga *sivin*. I incline to see in this, first a mutation **f-h**, which is common in Polynesian and is found elsewhere in Melanesia (Ambrym *vihin*), then a secondary mutation **h-s**, which is extremely common.

F-t. This is found as a variant Mota form in the same word *fafine* Mota *vavine* and *tavine*; perhaps in *fia* (218) how many Moanus *tje*.

F-th. Occurs once, in *fano* (147) to go Tangoan Santo *thano*.

P-l. Such a mutation is doubtfully suggested in *papa* (279) a board Aneityum *apalapal*, thin, flat.

5. Lingual to palatal:

L-k. This rests upon *lima* (313) hand Vaturanga *kima* Nggao *kame* Aneityum *ni-kman*, and *talinga* (250) ear Aneityum *tiknga*.

L-ng. This rests doubtfully upon the single instance *lalo* (123).

6. Palatal to lingual:

NG-nd. It appears solely in *talinga* Natalava *kulinda*.

The second and smaller group of these anomalies is made up of the mutations from and to series two removes away.

7. Palatal to labial:

NG-m. This rests, abundantly supported, upon the single instance of *ngata* (199) snake Santo *mata* Efate *mwata* Mota *mata* Malo *moata*, all probably equivalent, and a variant Efate *mata* is equivalent with Santo *mata* Bierian *n'mata* Malekula *na-mat*.

K-m. If this be valid it must rest upon *kili* (304) Motu *miri*, with the added disadvantage that Melanesia affords us almost no identifications of this word. The *m* in *kati* (302) Bierian *mkati* follows a line quite other, it is clearly akin to the prefacing of the mutes in Viti; this is found again in *keli* (297) Baki Bierian *mkili*.

K-v. For this we find the single instance of *kulī* (194) dog Malo *vuria* Tangoan Santo *vuriu*. It will be observed that the area of this leaping mutation is included in the but scantily more extended area of the similar **ng-m** mutation.

K-w. This very interesting mutation, not only a leaping mutation but as well from a consonant to a semivowel, while most firmly validated, rests upon the single instance of *kutu* (306) louse Omba (etc.) *wutu* Merlav (etc.) *wut* Pak (etc.) *wu*. The area of its occurrence includes all of the **ng-m k-v** area of the Banks Group and the northern New Hebrides, with a yet further extension in Sesake to the central tract of the latter archipelago.

8. Labial to palatal:

M-ng. In a single instance, *malum* (316) Lo *melunlung* Alo Teqel *mulunlung*. It lies in the same Banks Group area of anomalies.

F-ng. For this, too, we have but one example, *fiha* (215) how many Nggao *ngiha* Vaturanga *ngisa*. It lies in an area of marked anomalies, in fact with the **k-h** and **n-m** areas it completes a triangle in southern Ysabel and New Georgia and northern Guadalcanar of the Solomons, within which lies Savo of a far different linguistic character.

F-k. This rests as yet uncertainly on *ufi* (273) yam Tanna *nuk*, and then only if *n* function as article with a substantive *uk*, *n-uk*. We note in uncertainty *ijo* (206) down Aneityum *suko* Gog *sug*. The mutation in *nojo* (201) to sit Nggao *nokro* is wholly abnormal.

9. Finally we have left for consideration a half dozen variants which elude the foregoing effort to find order in irregularity.

NG-nj. Noted in *matangi* (274) the wind Aneityum *ni-mtinjop*. It is possible that *m(i)tin* is the survival of the stem *matangi* and *jop* an accretion of some sort; I have been unable to identify *jop* as an independent word or in other composition in Aneityum.

N-ny. This occurs in *namu* (328) mosquito Aneityum *inyum* Moánus *njam*. Buka and Bugotu have already been noted as varying this **n** to *gn*.

S-y. In *sulu* (182) torch Baki *yulu*.

T-dr. Found in *to'a* (375) to subside Ambrym *dro dru* to abide; *tutulu* (367) to leak Baki *drudruli*. Associated herewith is **t-ndr** *talinga* (350) ear Moánus *ndrilinga*, *tahi* (352) sea Moánus *ndrās*. In this reinforced **r** we have elsewhere found evidence of the effort to reproduce **r** grasseyé.

The result of this inspection of the anomalies in mutation is that we identify two distinct areas in which Polynesian material was rudely subjected to purely Melanesian methods, one area somewhat diffuse in the northern New Hebrides archipelago, including the Banks Group and Torres Islands, the other sharply defined on the larger islands in the mid Solomons; and that in at least the two more numerous of these anomalous mutations there seems an inter-relation between the two areas.

If the result of all this painful examination were no more than the circumscription of these two small areas, interesting as that result

might become when the material for Melanesian study is more abundant, we should judge, and rightly, the time and labor ill spent which brought no better returns.

But I feel confident that this material, thus handled, does unfold to us the log of the Proto-Samoan swarm and does prove to us that this migration, at least, followed the Melanesian course quite regardless of the wind-and-wave argument on which Dr. Thilenius has expended so much attention. It will be observed that these studies have identified Proto-Samoan elements in Melanesian, and scarcely other than Proto-Samoan. The Tongafiti swarm does not appear. That must be left for later study: first, its segregation in Polynesian philology, then its identification in whatever travel lane it may have followed. It may be that it can be identified in that mid-Pacific track which Thilenius proposed. This much is certain, the Tongafiti migration has left absolutely no trace of its passage in Melanesia.

On the sieve hypothesis, namely, that the Polynesian content of Melanesia is due to drift of castaways from Nuclear Polynesia, we should look to find such content strongly localized at those points more immediately to leeward of the point of involuntary departure, that is in Viti and the New Hebrides. Yet as to Viti the Samoan record is clear. It was not drift of castaways, it was a long series of purposeful voyages from Samoa to Viti, from Viti to Samoa, for love and for war; it was such a common voyage that the sisters Tilafaingā and Taemā swam it. And as to the New Hebrides, where the Polynesian content by this theory should be at its best, we have just proved the existence there of an area in which the Polynesian is at its poorest. Furthermore this Polynesian element is found quite as strongly, in fact more strongly, in the Solomons and yet more northern groups quite outside the normal course of drift, so far as I am able to identify it upon the charts with the aid of no merely theoretical familiarity with the winds and currents of this western Pacific.

Let us rather examine our data in the light of what might be expected of a great ethnic swarm, and not the feeble struggle for life of fishermen landed in distress upon inhospitable shores. Let us set before ourselves the manner of such voyaging.

Under the stress of some expulsive force acting upon their rear in Indonesia, under the draft of some force leading out into the eastward unknown, the Proto-Samoan fleets passed through some one or more of the free channels out of the Malay seas. They were navigators, for, as I have already had occasion to remark, we can not deny them their ability to sail the seas to Nuclear Polynesia, while granting, as we must, their ability to sail voyages of equal length out of Nuclear Polynesia to yet ulterior eastern lands. Samoa was no dockyard, it was no school of navigation; Bougainville's name

of Navigators' Islands for that group had no deeper signification than that he found his ships surrounded by a fleet of canoes.

We know the type of these vessels. Discoverers have described them in the accounts of their South Sea voyages; sketches of them there are a-plenty. I have seen the last in Samoa of the type of double canoes with sails fit for ocean-going. We know that each could carry its hundred or so of passengers, could eat up into the wind and lay a course almost as close as the fore-and-afters which are the American contribution to the marine. The one principal defect in these vessels as the vehicles of long voyages was in the victualling, and that defect produced a system of voyaging without which we should be at an utter loss to prick their course upon our charts.

Each of these voyages was an Odyssey. Stocked with such food and water as they could find the means to carry they coasted wherever coasts were available to follow, and thus they voyaged until the commissariat called for replenishing. Then they landed, they established, albeit temporarily, food colonies until the land could yield them a crop sufficient to carry them yet farther, until the same ventral need established them yet again in a like food colony.

These revictualling settlements are of the utmost moment in our study. Three elements are primal in the establishing of each such settlement. It must have a sufficient supply of water; it must show an encouraging area of soil fit for tilth; its autochthonous population must be such that the voyagers might feel secure of maintaining themselves and their families during the months of the crop period, whether by superiority in numbers or by better skill in warlike arts is immaterial.

In general the supply of potable water would be found ample wherever the two other conditions were satisfied. In the whole western Pacific area there is a wide contrast between two types of islands mingled in close juxtaposition. The large islands are commonly high, great masses of volcanic extrusion with forbidding shores and little productive soil in sight save in small patches in deep bays. A race in whom the ethnic sense had reached such a high stage of development as to send them forth in company as these Proto-Samoans swarmed, would naturally expect that the large population of a large island would assemble in concert at the point of attack to repel the invader. The small islands are commonly low; their acreage is greater up to the visible forest, this being an important criterion, for visible possibilities of tilth point to a necessary sojourn of but one crop season; to clear the jungle for plantation would require three and probably more seasons. The population of a small island, even if aggressively hostile, would be more within the control of the adventurers of a single vessel or small squadron. We

should look, then, to find the Polynesian element most strongly marked in these smaller islands rather than on the adjacent main where Dr. Thilenius is so insistent in pointing out their absence.

Remember the Proto-Samoans are voyaging under sail.

What must a Nelson have before Trafalgar can be his day? The weather gage. Dreading the perils of a lee shore, does not every sailor hug the wind? There is in this no deep ethnic principle which we are called upon to establish as in the possession of our Polynesian swarm. It is sufficient to know that they were under sail upon the sea; the rest follows as an elemental principle of the mechanics of seamanship. Thence we shall do well to look for them to windward in the lands along which they pass, less to leeward.

Coming from Indonesia into the Pacific, the coasting voyage along the rugged heights of the Solomon Islands, which rise in the sea from Buka to San Cristoval, set for these voyagers a course approximately southeast as we now should lay it by compass, full and bye when reduced to the rhumb of the wind prevailing during the months which would be found most favorable for navigation. After 600 miles of navigation by landmark in this great chain which with consistent uniformity has coincided with a full and bye, what more natural than that, when the last landmark has sunk astern and the open sea is to be adventured, the pilots still should follow the course set for them by the wind? Next upon the track thus hugging the wind lies the Santa Cruz Group. Beyond this small archipelago lies yet another void of the sea, always the sea they must have loved, always the constant draft of the trade wind which hitherto not only had carried them on their course but had laid for them that successful course. We must never lose sight of the fact that it was only those who followed this course full and bye who found the chance to survive—a few points off and the voyage was protracted in pain and ended mutely in starvation and thirst upon an empty sea which marks no memorial of the manhood it takes.

From Santa Cruz the intervals of the sea which we know are uneven. Working on the wind there lie a thousand miles of all but unbroken ocean before the next landfall. To the south—near, yet out of eyeshot—lie the New Hebrides. With chart and compass we can find the nearest land, to seek or to avoid as may best suit the purpose of our voyaging. But these navigators of the Polynesian swarm had no knowledge of what land might be in the unknown sea. For many leagues the course set for them by the unchanging wind had led them coastwise where land was, and when the sea grew empty the same sailing track had led them on to yet new land. Thus may we reasonably expect that taking their departure from the last sight of Santa Cruz the fleets would set bravely forth upon the course that so long had served them and so well.

I feel that I can not set too acute an accent upon this idea of course. Without knowledge of what might lie before them, with no chart and with no compass to guide them, even had they known what they sought, there was but one fixed and recognizable fact in empty sea under the cloud-flecked emptiness of sky. This fact was direction, the angle with the wind at which their canoes were at their best sailing speed. Where all else was uncertainty the fixity of this fact must have kept them true upon the sea by night as well as by day, for in the darkness, when the eye could no longer see the tremor of the after leach of the great mat sail bellying above them, the ear could be warned by its quivering. All else uncertainty, this alone was fact.

The New Hebrides, therefore, lying so near would yet be distant because out of course. Upon the shores from Norbarbar to Aneityum, still more remote and still more to leeward, in Uea, Lifu, and Mare, at the most remote spot to leeward beyond which lay no land whatever, at New Caledonia, would come only the dull sailors and those who through blast of gales had sagged down the wind. Therefore from the point where the axis of the land masses breaks from its northwest-southeast direction and sets off north-south we should expect to find a difference in the Polynesian content of the indigenous languages.

So far in these notes our attention has been given to the direction of the Polynesian traverse through Melanesia. We may pause briefly to consider a point of relative duration of this traverse, and we note with surprise that Thilenius has permitted himself to write of a measure of weeks.

Much earlier in this work I have noted the instances of Polynesian inclusions within Melanesia. Stated in terms of the point as now presented, these are cases where the duration of the traverse has reached the absolute maximum in a fixed and permanent settlement, a relinquishment of the voyage.

Remember that we have no means of determining what was the impulse upon which these voyages were undertaken. It will, however, involve no great strain of the probabilities if we assume as established the reasonable hypothesis which has been proposed, that the impulse upon the Polynesians commorant in Indonesia was an expulsive force and that it was applied upon them on their exposed northern flank and upon their rear equally exposed to the crowding of swarms of alien and incompatible migration from the Asiatic mainland. Upon this assumption we may naturally draw the conclusion that the power of expulsion had practically vanished when the Polynesian swarm had set the great island of New Guinea behind them. This we know of a certainty, in all the unknown ages which have elapsed, the Malayan peoples (if it were their ancestors who

crowded out the Sawaiori) have been able to effect no lodgment of settlement upon that dark island, and their trade settlement has scarcely advanced beyond the occasional raiding dash of the sea rover and slaver.

Once in Torres Straits, for such as found the exit in the Arafura Sea, once within the great bight of the Bismarck Archipelago, for what seems to have been the main flight, the voyagers lacked impulse as they certainly wanted direction. They were afloat, but they were headed nowhere in particular. The world may have been in a sense before them, but choice was limited to such lands as they might chance upon. I have already spoken of the necessity of crop settlement as a condition of their naval economy. Without destination to lure onward, without force behind to drive them yet farther along, such crop settlement under favorable conditions of soil, water, and subduable autochthons tended inevitably to become a permanent colonization.

If we note upon the charts the position of such Polynesian inclusions, crop settlements become fixed colonies—the islands of the western verge of Polynesia in Nuguria, Tauu and Liueniua, Matema, Ticopia, Sikayana, Mai, Aniwa, Fotuna—we shall find them without exception the windward islands of the archipelagoes with which respectively they are associated in descriptive geography. Even Rennel and Moiki, although they lie to leeward of San Cristoval in the southern Solomons, are yet a weatherly achievement to such voyagers as issued easterly from Torres Straits. Where we find these fixed colonies in such number there must have been other crop settlements similar in their beginnings which endured in the measure of years or perhaps generations until inability to withstand the assaults of the indigenes or the lure of some new squadron of wanderers of their own race and speech led them to essay yet again the great sea, never forgetting that it is inborn a characteristic of the Polynesian to hold himself proudly the master of the ocean.

If these considerations are to be held somewhat of more worth than the divagations of fancy there must somewhere be some record to give them substance. Where else, then, than in these speech records which we have subjected to such minute analysis?

But how to make the record appear?

For Mota, for Aneityum, and for Efaté we now have dictionaries of unequal excellence. These languages we may, therefore, compare with the Polynesian languages for which we have similar standards, indeed regulate by so much of the comparative Polynesian philology as has been elaborated upon these data. For so much we are thankful, yet these are but three, and in the data upon which these studies rest we have had under intimate dissection no less than

ninety languages in Melanesia. Had we dictionaries of each of the ninety we might easily note the exact percentage of words which mark the Polynesian content in each. Then our comparison would be as exact as it would be facile. Unfortunately there remain eighty-seven languages of which our knowledge rests upon a very few words preserved at random in many works of reference. The exact measure we seek is impossible of application.

Yet we are by no means left without recourse. There is at our hand a certain measure of the quality of the Polynesian inclusions in these Melanesian tongues. The identifications have been made with all the assistance which can inhere in long practical acquaintance with the comparative Polynesian philology. I have, accordingly, had no hesitation in definitely accepting as Polynesian identification many a word which would completely fail of recognition by the Polynesian of any one tongue. This is due to the fact that the Melanesian, alien to the *Spracheist* of his loan material, may deal with the Polynesian word which has come into his possession according to the spirit of his own speech. Thus the Samoan who says *fajanga*, to feed, might quite fail of recognizing his mother tongue when the New Irelander had trimmed here and added there to make Lambell *angan*; and his familiar *longo*, to hear, would be wholly inaudible to him in Marina *rogotag*. Yet there are words which he could comprehend.

I have therefore taken as criteria of this measurement the words in each Melanesian language which a Samoan, knowing only Samoan, could comprehend if he were set down on the alien shore amid a hostile folk under circumstances where every instinct of life would fill him with anxious desire to know from the strange sounds what disposition was to be made of him. Not the learned pursuits of a philologist this, but the working of the wits of a man under the compelling stress of elemental need. I assume that his ears thus pricked up would gather those words which exist in common in his language and that of his savage hosts, and there are many such, even where the final vowel has undergone abrasion. Further I assume that when the consonant structure of any given word remains the same in the two languages his wits would be sharp enough to recognize the word when the vowels had undergone modification; thus Epi *jefene* would be easily comprehensible to the Samoan who says *fafine* for woman. The same will hold when the vowel structure is constant; thus Ulawa *nimanima* could not but be comprehensible to the Samoan who knows his hand as *lima*. Finally, in those cases where the vowels remain unaltered and the mutation of consonants is not at variance with the system of mutation normal to the Polynesian languages, I feel justified in the assumption that the strain of need would awaken our Samoan to a conscious recognition of his

own word in its new guise. In effect I set before the individual the task which has proved easy to his race.*

For each of the languages of sufficient representation I have tabulated the results of this examination and have set them down in the foregoing tables. Employing the sum of these several elements as dividend, and for divisor the whole number of words in the available material which have been identified as Polynesian, we obtain a figure which stands for the quality of the resemblance of each language with the Proto-Samoan, and this coefficient of quality has been inserted in its proper place in the tables.

Now for the graphic presentation of the results. Upon the chart of the island-studded ocean between the termini of Indonesia and Polynesia, respectively, we insert these coefficients of quality and delimit the areas of equal resemblance.

*Not a single detail of such westward drift and its result can be lacking in interest to us. Therefore I note the following double instance from the Rev. John Inglis's "In the New Hebrides" (page 33):

"On Aneityum the idols were all, like the Jewish altars, of uncarved, unhewn stones. The only exception to this which we ever found was in the case of Tuatau, a *natmas* which I found at Anauunse and took home with me. Tuatau was of wood, a piece of a breadfruit tree. Like the idolaters mentioned by the prophet, the maker of this idol had chosen a tree that will not rot. It was a rudely shaped, uncouth figure, its countenance only very slightly resembling the human face divine. I was struck with its being made of wood, and afterwards learned that it was not a native idol—it was of foreign manufacture. It had a little history of its own, which may serve to illustrate that of 'the image which fell down from Jupiter' (Acts xix, 35). About the beginning of this [the nineteenth] century as nearly as native chronology supplied me with the date on which to calculate, in the days of Tuatau, a great chief of Anauunse, this poor idol was one morning found drifted ashore by the northeast wind. How long it had been tossed upon the ocean nobody knew. But as it bore all the marks of a Malay idol [Dr. Inglis thus denominates the Polynesians], and was very like the fisherman's god of Rarotonga, as given in Williams's 'Missionary Enterprises' and which, he says, 'was placed on the forepart of every fishing canoe; and when the natives were going on a fishing excursion, prior to setting off they invariably presented offerings to the god, and invoked him to grant success'—it seemed highly probable that this idol was a Rarotongan fisherman's god—that the canoe on which it was borne had been wrecked—that the poor fishermen had been drowned—and that the idol had been drifted along before the tradewinds till it was cast ashore on Aneityum. But, be that as it may have been, its subsequent history was well enough known. Among a people remarkably unskilled in the pictorial arts, its faint resemblance to the human form secured for it favor and veneration. The day on which it was found was one on which Tuatau was making a great feast. The *natmasses* were always closely connected with the feasts. It was one of the fundamental articles in the creed of heathenism on Aneityum that the man who made the largest feasts and who presented the most costly offerings to the *natmasses* was the man that most effectually propitiated their favor. The sacred men all declared that the *natmasses* had made this image and brought it to Tuatau; and the chief and the ignorant populace accepted the statement as readily, and believed it as firmly, as the Asiarchs and the idolaters of Ephesus believed that the ugly little statue, made of ebony and vine wood by Canetias, was, as the priests of Diana affirmed it to be, 'the image that fell down from Jupiter.' The chief received it as a token of the special favor of the *natmasses*, placed it within the sacred enclosure, and thenceforth regarded it as his tutelary divinity. After the death of Tuatau the idol received his name, and was supposed to be watching over his spirit; and it continued to be worshipped till Christianity was accepted in Anauunse.

"Had the idol been a man—a shipwrecked sailor, or one of the poor fishermen on the prow of whose canoe it sat conspicuous as Castor and Pollux did in the ship that carried Paul—to a certainty he had been killed, and most probably also eaten; at least a shipwrecked sailor met with this sad fate at Eromanga within less than a twelvemonth of the time when Tuatau fell into my hands; but being a block of wood, shaped so as to have a faint resemblance to a man, it was set up and worshipped as a god."

As soon as we trace the contours connecting the islands whose languages show approximately equal coefficients of Polynesian quality it becomes at once manifest that we are concerned with two great areas. These are so distinct, so widely separated, that it is practically impossible to conceive of them as having the same origin, at least in this Melanesian tract of the Pacific with which we have to do. We shall therefore do well to consider them in detail, each by itself, and to reserve the discussion of their diversity of origin until after that preliminary survey.

One of these areas embraces southern Melanesia, from the Torres Islands to New Caledonia. In these islands, the New Hebrides forming the principal and determining mass, the contours of equal quality extend from northwest in a general direction toward the southeast. Along the axis cutting these contours from northeast toward southwest we find that the coefficient of quality diminishes from the east.

In the southern New Hebrides we find two instances of purely Polynesian speech, at Aniwa and at Fotuna, these representing the position of the contour of 100. It is important to note that Aniwa and Fotuna are the most weatherly of the New Hebrides archipelago, that is to say they are the points to be reached by a fleet steering full and bye, the best sailing point of canoes and the only sailing point which gives the helmsman on unknown seas a sense of direction for his course. The three larger islands in this section of the archipelago show scant traces of Polynesian admixture, and the quality coefficient is low; Eromanga 58, Aneityum 46, and Tanna no more than 29. Still farther west the Loyalties make no better showing: Nengone 45, and Lifu 42, while Uea records a Polynesian content entirely of the modern epoch and known to be derived from an involuntary voyage from Uvea in Nuclear Polynesia.

In the examination of the central and northern New Hebrides, for except in the history of discovery it is not advisable to dissociate the Banks Group, we are able to draw contours of 90, 80, and 70 quite plainly. Along the windward face of the archipelago appear spots which might establish the curve of 100, such being the Polynesian settlement in Efaté and Mae on the island of Three Hills. At the north the curve of 90 is established on Vanua Lava by Leon, the other languages of that island standing at 40 and the bush language (Alo Teqel) at the lowest mark of 19. Working down the weather aspect of the archipelago, Arag falls but little below this contour and Makura, Nguna and Efaté lie above it. Mota in the extreme north shows the same influence as Leon on Vanua Lava. The contours of 80 and 70 are satisfactorily drawn in close parallelism with that of 90 and are well established by a sufficiency of points of identification. The high value of Marina 89 in the deep bay of the north coast of Espiritu Santo need not prove as anoma-

lous in position as at first sight it might appear. While Vanua Lava-Mota-Arag identify one point of migration entrance into the archipelago, it is quite probable that Marina-Arag identify another entrance for fleets sailing a little to leeward when making this landfall.

We next examine the northern area. Its curve of 100 is beautifully established along a great length; from southeast to northwest we note Anuda, Ticopia, Matema, Sikayana, Liueniua, Nukumanu, Tauu and Nuguria, all Polynesian communities, all the most weathery islands of the Santa Cruz Group, of the Solomons, and of New Ireland respectively. At the other limit the curve of 60 may distinctly be traced along the leeward faces of the Solomons and of the Santa Cruz Group. Between these two well-marked contours the curves of 70 and 80 are very distinct in the Solomons and in the strait between New Britain and New Ireland. Along the range of the Solomons the migration track is plainly drawn along the weather coast or in the easy channel from southern Ysabel to Ulawa.

We may now examine the points at which the migration streams which establish these two areas come into closest approximation. These points are two, the interval between Deni and the Torres Islands, and the interval between Moiki-Rennel and the southern Solomons. Here, if anywhere, the two streams came their nearest to a chance of mingling.

In this examination we must bear in mind a few clearly established facts. These voyages were performed without chart or compass. The leaders knew nothing of what land might lie before them. Their only norm of direction was set by the constancy of the trade wind and their only method of conforming to that norm was by sailing closehauled, to which they had the added inducement of seamanship in that this was the best sailing point of their canoes. To deviate from that course where no landfall had been made and where there was no knowledge that land might exist would be to relinquish a purposeful voyage for merely idle cruising.

In the case of the gap south of Deni intermingling could have taken place only from the north toward the south. It is inconceivable that a fleet having made the most northerly landfall of the New Hebrides, whether at Lo or at Vanua Lava, should leave the new lands already in sight to beat dead to windward where no land was known to exist. Similarly there could be no reason for vessels taking their departure from the Santa Cruz group to leave the one course which they knew, to set out toward the south which was a direction they had no means of determining, and to run free upon their least convenient and most dangerous point of sailing.

At the other point of approximation we should note that Moiki and Rennel are invisible from the nearest islands, Guadalcanar and

San Cristoval, and that no land is visible from them. They are islands having the speech quality coefficient of 100, for they are settled by Polynesians. Such islands we have already learned to look for as the most weatherly achievements of Polynesian voyagers in this great migration movement. In the southern Solomons the course of migration is distinctly marked to windward of Malanta and through the island-dotted channel north of Guadalcanar and San Cristoval. With all these landmarks to point the way it is inconceivable that canoes should leave the coastwise course and head to leeward for islands far beyond their sight and wholly out of their knowledge. Likewise for voyagers passing beyond Moiki-Rennel the closehailed course would not carry them within sight of San Cristoval, but would give them a more distant landfall in the Torres Islands, and thence the land in view would deflect them southeastward on a coasting voyage.

It is quite clear, therefore, that these two points of approach were gaps not crossed and that the two streams of migration remained largely distinct. The dull canoes of the northern stream, a few set to leeward by gale or other accident, may have reached the southern stream and have escaped notice; but that there was any accretion to the northern stream from the southern is wholly out of the question.

No account has yet been made of the two western points of this identification, Moanus 83 north of New Guinea, and Motu 85 in the Gulf of Papua on the southern coast of that great island. With the mass of this almost continental island between them these two distant points of equal quality must stand apart. Each represents the most westerly identifiable point of a migration swarm and these two swarms must have been wholly distinct. Moanus I regard as the first point of the stream which in part went to windward of New Ireland and in part has left its traces in St. George's Channel, thence has swept along the Solomons, thence past Matema and Ticopia and onward to Rotumâ, and still beyond to its lodgment in Samoa—the Samoa Stream. Motu and Moiki likewise establish early points on the migration track which generally parallels the Samoa Stream, but runs some distance southward until it makes the landfall of the northern New Hebrides and then is deflected sharply south by the opportunity and the convenience of sailing coastwise with its double joy of war and victual, which sets forth once more upon empty sea from Aniwa and Fotuna and at last enters Nuclear Polynesia by way of Fiji—the Viti Stream.

Now it comes to us to discuss briefly the relative age of the Polynesian content identified in Melanesian possession and the same material in Polynesia itself.

Of two forms in general, one with a final vowel and one with a terminal consonant following the same vowel, which in all proba-

bility is the elder? As between two great groups of speech, to one of which the final consonant is most repugnant, to the other of which the final consonant is so distinctly pleasurable that in many parts of the group a stem final vowel is abraded in order to reach a closed syllable, in antecedent probability which of these represents an earlier type?

We do not have to rest on the antecedent probability, clear as we shall find it. That the form in the terminal consonant, the characteristic Melanesian form, is the earlier and elder is shown us in the Polynesian itself. Look at *vālu* (281) to scrape taro; Efaté *baru-si* Mae *barusi*, of the same sense, might lead us to infer that the root form is *barus*; in Samoan *vālusanga*, the derivative meaning taro scrapings, we find a direct proof that the *s* is radical, for the formative suffix was applied early enough to protect the final consonant from abrasion. Examples abound in these data; I note but these few for the reference of such as wish to give the topic extended study: 71, 81, 160, 162, 191, 204, 224, 227, 266, 283, 289.

This, too, plays an important part in the condemnation of the sieve theory and the castaway drift. Which is more reasonable, that a dozen very closely allied languages should act harmoniously in dropping final consonants, or that ninety languages with very scant community and no intercommunication should agree in adding precisely the same consonant as closure to open roots brought them in storm-driven canoes, and that the same terminals should be picked up in several cases by the score of languages in Indonesia, a region physically exterior to all such possibility of canoe drift? There can, indeed, be no shadow of doubt that the Melanesians in their keeping of the Polynesian loan material have preserved an earlier type. Therefore the conclusion is inevitable that the Polynesians were commorant in Melanesia at some time, and for some time, anterior to their settlement of the unoccupied lands of the central and eastern Pacific.

We are dealing in these studies with the record of what the Polynesians taught the Melanesians, no inconsiderable contribution in the aggregate. But did the Melanesians teach the Polynesians nothing? Was the gift altogether so one-sided?

In the rigid examination of the material I can find but a single word which I suspect to have come into Polynesian possession from Melanesian tongues. This is Samoan *'isumu* (251) rat, and it calls for no little agility to identify this word, not elsewhere Polynesian and by no means in common Samoan use, with the word which means *rat* in certain parts of Melanesia, namely in the New Hebrides, and in the Solomons in just that area of the islands of the Malanta channel which marks our curve of maximum quality of Polynesian content.

The reason is by no means far to seek.

Homekeepers have ever homely wits. Our Polynesians, who had the genius to conduct such voyages as under far more favoring conditions have brought immortality to Quiros and Mendaña, to La Perouse and Dumont d'Urville, to Magelhaens and Roggewein, to Cook, to Byron and to Bligh, to Wilkes—such were a folk far in advance of the rude autochthons of the islands they encountered in their passage. The black man could learn much from the brown; there was little in the liberal arts that the Melanesian could communicate to the bright, aye the brilliant, Polynesian. Where they came into contact could only have been in the crop settlements, and in such it must have been an essential condition that the black sat in subjugation to the brave brown sea-rover. What does the slave in any community teach to his lord which comes into the prevailing speech? One word in these two hundred is all we can suspect the Polynesian to have taken from the Melanesian, and that one very doubtful. Yet who of us without painful research can identify for so much as the five fingers of but a single hand a word apiece which the Britons have set into the language which is ours by right of the conquest of Britain by the Roman, the Saxon, the Norman?

Yet one more reason is simultaneously and equally operative. Crop settlement approximating semi-permanence may have taken place piecemeal among ninety varying languages. Such Melanesian elements as each settlement might have permitted itself to adopt in the particular spot of its sojourn would be incomprehensible to all other members of the migration swarm who had sojourned in contact with each of the other eighty-nine languages. Upon their reassembling in Nuclear Polynesia the alien elements comprehended but by the company of a single vessel would be restricted in comprehensibility to that crew alone, and, thus from the beginning limited in use, would tend toward disuse and Polynesia would know them no longer; the superior language would heal its own wounds.

Before leaving this central chapter in which we have discussed in many lights the Polynesian content of Melanesian speech I wish to sum up the major conclusions to which we have been led.

1. In the plexus of Melanesian speech a certain element has been proved to have a common origin with the Polynesian.

2. That this varies in quality according to the ability of its Melanesian possessors to respect the vital principle with which it came into their possession.

3. That this represents, wherever the data admit of deduction, a phase more primitive than the Polynesian of the eastern archipelagoes.

4. That it can not be drift material brought by eastern castaways, but is derived from the sojourn of Polynesian ancestors in Melanesia when on their way from Indonesia to the mid-Pacific.

5. That from the material here involved in discussion we can lay out one great track of the migrant swarm with much precision, and that a second may be laid out with considerable probability.

6. That along these two tracks the only Polynesian voyagers who have left any trace are those of the earlier Proto-Samoan swarm, and that the wanderings of the later Tongafiti migration must be sought elsewhere than in Melanesia.

CHAPTER VIII.

SAWAIORI MATERIAL IN INDONESIA.

Limitation of the points of inquiry—Check-list of the Indonesian material—Synoptical tables of mutation varieties—Mutations compared with the systems of the Pacific languages—Character and probable place of the contact of Indonesian and Polynesian—The nature of an ethnic swarm discussed—The Malay advance was an affair of outposts—Whence arose the speech community, which after all is a matter of but a gross of words—The Indonesians are shown to be borrowers—Two lines of Sawaiori escape through the Malay Archipelago lead to the two tracks identified through Melanesia—The designation Malayo-Polynesian should be discarded because false.

The scope of this work does not include such a detailed dissection of the Indonesian languages as that to which the Melanesian tongues have been subjected in the foregoing chapter. This speech area has its own diligent students, and to their researches we owe the present advanced state of our knowledge of the multiplicity of Malaysian speech. Thus are we spared the necessity of pathfinding.

In the present chapter we shall limit our attention to the consideration of such Indonesian material as is brought into comparison with the data from the Pacific areas here under discussion. We shall examine it for the purpose of discovering to what extent it may be used either in support or in disproof of the theory that the Pacific languages have developed out of the Indonesian, or that both derive from a common parent. In this we shall develop whatever support such examination may give to the theory that this common parent was Semitic. We shall be led to a rigid consideration of the validity of the older consociation of these speech areas as the Malayo-Polynesian family.

Beyond these several points of inquiry we shall not advance. We shall do no more than to place these data conveniently at the service of students of Indonesian philology.

As we have done in the earlier chapters we present a series of tables for readiness of access to the material here assembled. For a large amount of the Indonesian material indebtedness is gratefully acknowledged to the industry and research of Mr. Tregear recorded in his "Maori Comparative Dictionary."

Malay . . .	9	10	27	29	30	31	32	33	34	36	37	45	46	47
	79	170	171	173	174	175	176	177	178	179	181	183	185	215
	216	218	220	221	222	223	224	225	226	227	228	229	230	232
	233	236	237	239	240	241	243	244	245	246	247	248	250	251
	255	256	257	258	260	261	262	264	265	266	268	270	271	272
	273	274	275	276	277	278	279	281	282	283	284	286	287	288

It will now be in order to tabulate as in other chapters the references to the several mutation varieties.

A.

a-ai					
Bolanghitam	309	Menado	309		
a-e					
Malay	216 250	Caimarian	350	Saparua	350
Malagasy	239 250 302	Dyak	309 324	Satawal	350
	316	Lariko	350	Sula	350
Awaiya	350	Liang	350	Teor	290
Baju	350	Mayapo	350	Togean Ids	292
Batumerah	350	Morella	350	Wahai	350
a-i					
Malay	183 302	Saparua	290	Teor	313 324 360
Malagasy	246 312	Teluti	290		
a-o					
Malay	324	Dyak	317 325	Salibabo	278
Baliyon	324	Kisa	282	Saru	312
Basakrama	312	Macassar	350	Togean Ids	312
Bugi	277 279	Menankabau	350		
a-u					
Malay	181 224 307	Java	224 324	Ternati	276
Bugi	350	Mysot	324		
ai-e					
Allor	291	Teluti	291	Togean Ids	291
Rotti	291				
ai-ei					
Batumerah	291	Morella	291		
ai-oi					
Baju	291	Vaiqueno East	291		

E.

e-a					
Malay	47 128 132	Bugi	47	Saparua	290
	247 272 297	Caimarian	290	Sulu	290
Malagasy	249 297 338	Java	272	Tagalog	249
Ahtiago	290	Lariko	290	Teluti	290
Awaiya	290	Liang	290	Teor	290
Batumerah	290	Salibabo	257	Visayas	310
e-ai					
Matu	276				
e-i					
Malay	132 261 290	Java	261 276 290	Magindano	276
	311 315 318	Kisa	276 318 323	Matu	261
	338 347	Macassar	347	Salayer	290
Ilocan	290	Madura	290	Sanguir	290
e-u					
Java	272				
e-y					
Malagasy	172 318				

I.

i-a							
Malay	174	225	227	Chamorri	350	Sanguir	329
	288	329		Dorey	291	Silong	300
Malagasy	355			Java	225	Tobo	330
Batavia	243						
i-e							
Malay	170	171	352	Kisa	274	Teluti	330
Awaiya	180	291		Sanguir	290	Timor	312
Basakrama	312			Saparua	350	Ulea	350
Caimarian	291			Saru	171	Waigiou	291
Java	171			Silong	291		
i-o							
Malay	225			Madura	305	Teor	305
Gah	352			Savu	305		
i-u							
Malay	222	223	225	Ahtiago	305	Matu	305
	362			Baju	305	Savo	259
Malagasy	171	362		Bouton	305		
i-y							
Malagasy	219	346	347 350				

O.

o-a							
Malay	255	257	296	Awaiya	257	Kisa	259
	311	336	353	Baju	257	Matu	336
	362			Bouton	257	Salibabo	257
Malagasy	255	282	296	Gah	257	Tagalog	287
	355			Kayan	259 263	Visayas	287
o-au							
Malay	309			Tagalog	309		
o-e							
Malagasy	353						
o-i							
Malagasy	331	353	362	Manatolo	259	Tagalog	259
Bouton	259			Savo	259	Vaiqueno East	259
Brissi West	259			Sula	259		
o-u							
Malay	181	221	325	Baliyon	269	Pampangas	353
	331	357		Java	285 336 354	Salayer	285
Malagasy	171	314	325	Magindano	259	Tagalog	353
	331						
o-y							
Malagasy	259						

U.

u-a							
Malay	79	220	221	Basakrama	266	Matu	344
	239	266	281	Java	299 316	Sambawa	343
	299	316		Lariko	278	Sula	306
Malagasy	273	281					
u-au							
Malay	334						

u-i

Malay 176 224 329
 358
 Malagasy 296 316
 Ahtiago 306 329

Ceram 329
 Gani 317
 Java 224
 Kandayan 343

Mysot 306
 Teor 301
 Waigiou 317

u-o

Malay 179 328 330
 341
 Malagasy 179 216 267
 273 278 294
 320 334 343
 Amblaw 316
 Batumerah 317
 Bolanghitam 278 317
 Bugi 328
 Dyak 317 328

Gah 317 360
 Ilocan 294
 Kayan 317 328 344
 Lariko 317
 Liang 317
 Macassar 216 306 328
 Magindano 317
 Massaratty 306
 Matabello 317
 Mayapo 306

Pangasinan 329
 Pampangas 321
 Salayer 330
 Saparua 317
 Sula 306
 Sulu 294
 Tagalog 267 321 341
 Teor 317
 Togean Ids 321
 Wahai 317

u-b

Malay 262

u-v

Malagasy 335

u-a

Malay 226 233 262

u-we

Awaiya 330

Batumerah 330

Caimarian 330

u-wi

Amblaw 330
 Cajeli 330

Massaratty 330
 Mayapo 330

Morella 330

u-yo

Bicol 330

u-yu

Malay 301

NG.**ng-g**

Malay 332

Ilocan 332

ng-h

Malagasy 336

ng-n

Malagasy 169 213 246
 274 308 346
 350
 Batumerah 350

Caimarian 350
 Lariko 350
 Liang 350
 Morella 350

Saparua 350
 Teor 350
 Wahai 350

ng-nh

Satawal 350

ng-nj

Chamorri 350

K.**k-ch**

Malay 224

k-g

Malay 178 225 227
 297 299 302
 Bicol 214

Java 225 299
 Menado 300

Nicobar 300
 Tagalog 214

k-h

Malagasy 249 258 297
 301 302 353

Teor 305 306

k-j							
Java	224						
k-ng							
Malay	181						
k-ngk							
Malay	171		Java	171		Tagalog	353
k—							
Ahtiago	300		Lariko	300		Saparua	300
Awaiya	300		Liang	300		Teluti	300
Batumerah	300		Matabello	300 306		Tidore	300
Caimarian	300 306		Morella	300 306		Wahai	300 306
Gani	300		Mysot	306			
L.							
l-d							
Malay	260 261 272		Baju	335		Macassar	327
	334 335 336		Baliyon	335		Matu	261
	364		Ilocan	334		Sulu	335
Malagasy	297 311 327		Kawi	334			
	348 350 364						
l-j							
Togean Ids	308						
l-kl							
Malay	272		Java	272			
l-n							
Timor	284		Wahai	312 350			
l-s							
Malay	220						
l—							
Sulu	350		Tagalog	350		Togean Ids	284
N.							
n-h							
Kayan	328						
n-kn							
Kayan	259						
n-l							
Macassar	328		Sassac	343		Wahai	317
n-ng							
Malay	296		Kisa	284		Tagalog	259
n-nj							
Dyak	328		Macassar	328			
n—							
Ilocan	290						
H.							
h-h							
Bolanghitam	278		Matabello	352			
h-d							
Ilocan	339		Kaili	278		Matabello	278
Java	278 339						
h-j							
Malay	278		Silong	339			

h-l					
Amblaw	278				
h-ndr					
Malagasy	47				
h-ng					
Kisa	278				
h-nr					
Bugi	47				
h-r					
Malagasy	278				
h-s					
Malay	352	Ceram	352	Kawi	352
Ahtiago	352	Chamorri	352	Kayan	278
Amboyna	352	Galela	352	Sanguir	352
Awaiya	352	Gani	352	Tidore	352
Bugi	352	Guaham	352	Tobo	352
Buru	352	Ilocan	323	Togean Ids	352
Caimarian	352	Java	352		
h-t					
Satawal	352				
h—					
Macassar	352	Sunda	352		
		S.			
s-ch					
Malay	45				
s-d					
Malay	47 298 338				
s-g					
Malay	132				
s-h					
Malay	233 337	Awaiya	180	Kayan	263
Malagasy	169 223	Java	342	Saparua	180
s-j					
Malay	341	Malagasy	341		
s-n					
Malagasy	344				
s-ng					
Togean Ids	298				
s-r					
Malagasy	298	Java	298		
s-t					
Malay	170 225	Malagasy	239	Java	225
		T.			
t-ch					
Malay	237 268	Sunda	352		
t-d					
Malay	357 358	Java	357	Timor	329
Gah	329	Matabello	329	Tobo	329
t-g					
Galela	352	Gani	352	Tidore	352

t-h					
Satawal	294				
t-j					
Malagasy	358	Macassar	352	Tobo	217
t-k					
Malay	225	Java	324	Teor	350
Caimarian	329	Kisa	318 323 324		
t-m					
Gah	217	Mysot	217		
t-n					
Java	346	Massaratty	217	Mayapo	217
Kayan	346				
t-ndr					
Malagasy	238				
t-nch					
Batak	329				
t-nt					
Malay	216 222 256	Macassar	329	Sambawa	329
Malagasy	256	Pangasinan	329		
t-s					
Malay	225 247 329	Buru	352	Sanguir	329
Malagasy	324				
t-tj					
Bugi	350				
t-ts					
Malagasy	329				
t-z					
Malagasy	47				
t—					
Malay	47	Bouton	217	Cajeli	217
Malagasy	47	Ahtiago	217	Lariko	217
Amblaw	217	Bugi	47	Liang	217
Awaiya	217	Caimarian	217	Sanguir	352
Bolanghitam	217				

M.

m-b		
Malay	224 315 327	Malagasy 172
m-h		
Tagalog	327	
m-lm		
Menado	313	
m-p		
Malay	325	
m-v		
Malagasy	327	
m-w		
Java	224	
m—		
Visayas	327	

V.

v-v					
Malagasy	307	Baju	291		
v-h					
Vaiqueno East	291				
v-b					
Malay	310				
v-f					
Malagasy	281				
v-p					
Malay	281				
v-w					
Malay	307 310	Dorey	291	Saparua	291
Ahtiago	291	Gani	291	Silong	291
Allor	291	Liang	291	Solor	291
Amblaw	291	Massaratty	291	Sulu	291
Awaiya	291	Mayapo	291	Teluti	291
Batumerah	291	Morella	291	Teor	291
Buru	291	Mysot	291	Togean Ids	291
Caimarian	291	Rotti	291	Visayas	291
Cajeli	291	Salibabo	291	Waigiou	291
Ceram	291				
v—					
Malay	291	Champa	291		

F.

f-f					
Malagasy	233 235 254	Massaratty	290 329 360	Sulu	290
	259 273 296	Matabello	259 329 (ph)	Teor	360
Ahtiago	329 (ph)	Mayapo	290 329 360	Timor	284
Ceram	329 (ph)	Satawal	294	Tobo	329
Gah	329				
f-b					
Malay	174 175 220	Bugi	360	Molucca	284
	222 246 272	Cajeli	360	Salayer	290 360
	273 291 292	Gah	290	Salibabo	290 360
	294 360	Ilocan	290 294	Sanguir	329 360
Malagasy	273 314	Kayan	294	Silong	290 294
Amblaw	360	Liang	350	Sulu	294
Baju	360	Macassar	290 294	Togean Ids	292 294
Bicol	292	Madura	290	Visayas	292
Borneo	360	Menado	360	Waigiou	290
Bouton	290				
f-ch					
Bouton	259				
f-h					
Malay	215	Lariko	290	Sanguir	290 (how)
Malagasy	213 329	Liang	290	Sula	259
Awaiya	290	Madura	290	Teluti	290 360
Caimarian	290 360	Manatolo	259	Timor	329
Kisa	259	Morella	290 360	Wahai	360
f-m					
Bicol	214	Sulu	214	Tagalog	214
f-mb					
Cajeli	290				

f-p					
Malay	170	223	245	Gani	290
	287	288	296	Java	288
	329			Kayan	259
Beu	243			Magindano	259
Bicol	214			Mysot	290
				Pangasinan	329
				Sambawa	329
				Saparua	290
				Tagalog	259 287
				Visayas	287

f-s					
Brissi West	259			Savo	259
				Vaiqueno East	259

f-v					
Malagasy	246	273	282	Ahtiago	290 360
	288	293	294	Kayan	273

f-w					
Bouton	290			Java	272 273 283
Bugi	292				290 360
Gah	360			Kisa	273 282 283
				Magindano	294
				Savu	294
				Teor	290

f—					
Batak	329			Macassar	329
Batumerah	290			Salayer	290
Caimarian	329			Saparua	259
				Teluti	290

P.

p-p					
Malay	183	217	241	Basakrama	266 279
	247	250	279	Bicol	250
	289			Bugi	279
Malagasy	179	250		Java	289
Amboyna	190			Kawi	250
Baliyon	250			Macassar	279
				Magindano	250
				Morella	190
				Saru	171
				Tagalog	250
				Teor	285

p-b					
Malay	45	171	176	Ilocan	284
	178	221	241	Java	171 285
	286			Kaili	284
Malagasy	218			Salayer	285
Batavia	243			Solor	284
				Tagalog	45
				Togean Ids	284
				Tringanu	284

p-f					
Malagasy	175			Lobo	284
Aru	284			Rotti	284
				Togean Ids	284

p-mb					
Malagasy	218				

p-v					
Malay	128	284		Malagasy	171

p-w					
Gilolo	284				

p—					
Kisa	284			Magindano	284
				Utanata	284

Frontal Abrasion:

Malay	47	177	258	Gah	275 290	Pampangas	328
	290	291	323	Java	290	Salayer	217
Malagasy	177	325		Kayan	344	Sanguir	217
Ahtiago	217	290		Massaratty	350	Saparua	217
Amblaw	217			Matu	350	Sulu	290
Awaiya	217			Menado	217	Teluti	217
Borneo	350			Morella	217	Teor	217
Cajeli	290			Mysot	290	Wahai	217
Dyak	312			Nicobar	300	Waigiou	290

Frontal Accretion:

Malay	79	170	175
	176	241	278
	304	321	337
Malagasy	175		
Ahtiago	305		
Awaiya	180		
Baju	278		
Bicol	274		
Borneo	300		
Bolanghitam	217		
Bouton	305	306	313
Galela	278		

Gani	312		
Java	274	278	321
	342		
Lariko	278		
Liang	278		
Macassar	327		
Magindano	274	313	321
Menado	300		
Morella	278		
Pampangas	321		
Pani	295		

Salibabo	312		
Sandol	278		
Saparua	180		
Silong	291		
Sula	278		
Tagalog	274	295	321
Teor	278		
Ternati	276		
Tidore	295	300	
Togean Ids	321		
Visayas	274		

Terminal Abrasion:

Malay	79	132	170
	175	176	270
	289	299	302
	304	357	
Baliyon	250	269	
Bicol	214		
Bugi	350		
Dorey	312		
Gah	312		

Gani	290	312	
Ilocan	267		
Java	299	357	
Jobi	312		
Macassar	350		
Mayapo	329		
Mysot	217	290	306
	312	324	

Kar Nicobar	324		
Sirang	312		
Tagalog	214		
Teor	306	350	
Ternati	276		
Tobo	329		
Waigiou	290		

Terminal Accretion:

Malay	128	171	177
	178	179	185
	222	223	226
	227	228	237
	239	245	247
	248	250	255
	256	260	266
	274	278	279
	284	291	298
	300	305	308
	311	317	323
	327	328	329
	331	332	335
	341	352	353
	359	362	364
Malagasy	171	177	179
	223	235	238
	239	250	255
	258	260	267
	273	274	278
	298	302	308
	314	320	335
	338	341	353
	355	362	364
Ahtiago	217	300	306
	317	324	329
	330	360	
Amblaw	217	278	300
	317	330	360
Amboyona	190		
Aru	284		
Awaiya	257	278	291
	300	317	330
Baju	305	335	
Baliyon	308	335	
Basakrama	250	279	350
Batavia	243		
Batumerah	278	290	291
	300	313	316
	324	330	350
Beu	243		
Bicol	274	330	
Bolanghitam	217	317	

Borneo	300		
Bouton	217	257	300
	305	312	
Brissi West	259		
Bual	278		
Bugi	267	274	277
	279	308	352
Caimarian	278	291	300
	306	330	350
	360		
Cajeli	217	278	290
	313	317	360
Ceram	278	329	
Dorey	291		
Dyak	317	324	328
Gah	278	290	300
	316	317	324
	329	330	352
	291	300	317
Gani	284		
Gilolo	317		
Guaham	277	284	300
Ilocan	323	332	334
	339	342	
Java	171	267	274
	277	298	308
	316	339	350
	352	364	
Kawi	250	352	
Kayan	259	277	278
	308	317	328
	344		
Kisa	259	276	278
	312	313	324
Lamong	343		
Lariko	300		
Liang	300	313	
Lobo	284		
Macassar	216	267	279
	353		
Magindano	259	274	284
	308	317	340
Massaratty	300	350	360

Matabello	259	278	300
	316	317	324
Matu	267	277	305
	336	344	
Mayapo	300	317	350
Menado	300		
Molucca	284		
Morella	190	291	300
	313	330	
Mysot	291		
Pampangas	277	278	327
	328	353	
Pani	295		
Rotti	278		
Salayer	330		
Salibabo	257	278	
Salu	278		
Sambawa	343		
Sandol	278		
Sanguir	217	352	360
Saparua	180	300	335
Silong	290	300	323
	324	339	
Solor	284		
Sulu	267	308	317
	335		
Tagalog	185	259	267
	277	295	308
Teluti	217	291	300
	324	330	360
Teor	278	285	300
	305	313	317
	324	360	
Tidore	278	300	
Timor	278	284	
Tobo	217	278	
Togean Ids	278	284	
Tringanu	284		
Utanata	284		
Visayas	185	274	278
	317	327	
Wahai	278	300	306
	324	350	360

Infixion:

Amblaw	300	Gani	278	Salibabo	278
Awaiya	278	Ilocan	277	Salu	278
Baju	278 301	Java	267 283	Sandol	278
Basakrama	250	Kisa	282 283	Sulu	267 335
Batumerah	278	Lariko	278	Tagalog	277
Bual	278	Liang	278	Teor	278 291
Bugi	277	Massaratty	329	Tidore	278
Caimarian	278	Matu	277	Timor	278
Cajeli	278	Mayapo	329	Tobo	278
Ceram	278	Morella	278	Togean Ids	278
Ende	278	Pampangas	278	Visayas	278
Galela	278	Rotti	278	Wahai	278

Metathesis:

Malay	316	Ilocan	346	Sulu	330
Malagasy	316	Java	316	Tagalog	250
Ahtiago	330	Kawi	250	Teluti	330
Baliyon	250	Macassar	290	Teor	291
Bicol	250	Silong	290	Wahai	330

Next we shall compare the mutation series of the consonants in Indonesia with the variants observed in the Pacific areas as set forth in the tables in each of the two preceding chapters. The results of such comparison fall under the several following classes:

Indonesian only.

ng-h	k-ng ^k	n-kn	h-ng	s-d	s-ng	t-ndr	t-ts	m-lm	m—
ng-nh	l-kl	n-nj	h-nr	s-g	t-ch	t-nch	t-z	m-p	f-ch
k-ch	l-s	n-l	h-r	s-j	t-g	t-nl	m-b	m-w	f-m
k-j	n-h	h-ndr	s-ch	s-n	t-h	t-tj	m-h		

Indonesian-Polynesian.

k-ng	n-ng
------	------

Indonesian-Melanesian.

ng-g	l-j	h-t	s-t	t-n	v-f	v—	f-s	p-mb	p-w
ng-nj	n—	h-d	t-d	m-v	v-p	f-mb	p-f	p-v	p—
k-h	h-j	s-r	t-m	v-b					

Indonesian-Melanesian-Polynesian.

ng-n	l-d	n-l	h-s	t-j	t—	v-w	f-h	f-v	f—
k-g	l-n	n-ng	h—	t-s	v-h	f-b	f-p	f-w	p-b
k—	l—	h-h	s-h	t-k					

We shall forward our understanding of whatever interrelation may exist among these three several language groups by a more detailed examination of each of these classes. If there be any validity in the theory that the three families are descendants of a common parent we should look for confirmatory evidence in the amount of their concord in mutation principles. This can be made to appear only in a detailed examination.

In Polynesia we have seen the palatals to be subject to but slight derangement. In the case of **ng** the more frequent mutations are of the form **ng-n** and **ng—**. Only the former extends through all these families. In Polynesia it is normal in Hawaii, the western

Marquesas, and Sikayana, sporadic in Rotumā. In Melanesia it is not normal (with a possible exception in the case of Santo); it is traceable through the languages of that area rather as a quality with which a certain few loan words are endowed. In Indonesia it is seen to be a quality of *talinga* (350); in Malagasy only is it sufficiently frequent to be considered as a speech endowment; the Malagasy words in which this mutation is found are all identifiable as Polynesian material, and several of them are carried with the same modification through Melanesia.

In Polynesia the mutation **ng-k** is normal in the eastern Marquesas, sporadic in one instance in Viti. In Melanesia its place is taken by **ng-g**, a word quality. In Indonesia it is found but once.

ng-nj is highly problematical in the sole instance in which it is found in Aneityum. Its presence in the Indonesian rests upon Tregear's citation *talinga* (350) ear Chamorri *talanja*, against which we set *talanga* from Fritz's Chamorro dictionary.

ng-nh, resting on *longo* (336) sound Malagasy *rohona*, is not certainly Sawaiori.

ng-nh in *talinga* (350) ear Satawal *talinhē* is a good identification but the mutation is without parallel.

K.

In Polynesia the principal variation of **k** is to extinction, this being normal in Samoa, Hawaii, and Tahiti, and not unknown in several other languages. In Melanesia it is found widely extended as a word quality; in Bululaha, Saa, Ugi, and Ulawa it appears as a speech endowment, these being in the region of crop colonies in the Solomons. In Indonesia it appears as a word quality of but two vocables.

Of the **k-g** mutation we have record of but a single instance, sporadic in the Paumotu. In Melanesia this is of frequent occurrence and in many languages it is normal. In Indonesia it is infrequent outside of the Malay, a speech endowment none the less though sluggish; the Malay and Javanese words in which it occurs are Sawaiori, those in other languages doubtful.

k-h is of rare occurrence in Melanesia. In Indonesia it is satisfactorily identified in Teor and in some, though not in all, of its occurrences in Malagasy.

k-ng is of rare occurrence in Polynesia, equally rare in Melanesia, and its single appearance in the Malay is not a wholly satisfactory identification.

k-ngk practically corresponds to the **k-ngg** found four times in Viti, rarely in Melanesia. In Indonesia it is found in but two vocables, each in two languages.

k-ch and **k-j** are not satisfactorily identified.

L.

Grouping *l* and *r* because of the frequently mentioned impracticability of establishing a stem independence in our present data, we note that in Polynesia the most frequent mutation is the extinction. This becomes most strongly marked in the Marquesas. It is infrequent in Melanesia. In Indonesia it appears in Sulu and Tagalog in the same word, *talinga* (350) ear, and in the Togeian Islands in *pula* (284) to shine, at least the *l-y* mutation noted in that instance is a close approximation to extinction.

The *l-n* mutation in Polynesia seems more a word quality, for it appears in two languages each for data 100, 154, 312, 313; these removed from the reckoning, we find it only five times, all in Nukuoro. In Melanesia it is rare. In Indonesia it is found in *pula* (284) to shine Timor *funan* the moon, twice in Wahai; these three words are included in the list of those similarly affected in Polynesia.

The long leap from lingual semivowel to mute of the same series is found but once in Polynesia (*l-t* Mangareva 287) and once in Viti (*l-nd* 287). In Melanesia it is scarcely more frequent. In Indonesia *l-t* does not occur; *l-d* appears sporadically in several languages, one instance (350) containing the greater number of its Melanesian occurrences as well. This mutation is most marked in Malay (seven times) and Malagasy (five times). Of the Malay instances but two (260, 334) are open to any doubt, of the Malagasy but two (348, 350) are really convincing. The *l-j* mutation, really a *t*-variation, is found but once in Indonesia, three times in two languages of the New Hebrides, and not at all in Polynesia. *l-s* is noted in a single instance in Malay and very unsatisfactory. *l-kl*, noted once in Malay and Java, is rather an accretion than a mutation.

N.

The variants of the three nasals follow two cleavage planes, the vertical in series, the horizontal across all series. In the case of *ng* we have observed as well *ng-n* and *ng-k*. In Polynesia *n* shows this horizontal movement only backward, *n-ng*, and this only in Moriori and once in Viti. In Melanesia *n-ng* is quite widely spread, affecting several vocables and most of them repeated in several languages; here is found in one instance the forward *n-m* mutation. In Indonesia the *n-ng* mutation occurs once each in Malay, Kisa, and Tagalog, the Kisa instance doubtful.

In Polynesia the only vertical mutation is upward in the series to the semivowel, to *l* in a single word in two languages, to *r* in another word in two other languages. This mutation in Melanesia has a wide extent in the case of *nifo* (259) tooth, and is less widely found in three other of our data. In Indonesia it is found once each in Macassar, Sassac, and Wahai, the latter affecting the same vocable as in Alite.

The extinction of **n**, found once in Marina, is highly doubtful in the single Indonesian case in *jafine* (290) woman Ilocan *babai*.

The **n-l** in Kayan, **n-nj** in Dyak and Macassar, and **n-y** in Pam-pangas are found only in the vocable (328) which in Macassar has also afforded an instance of **n-l** and gives **n-ny** in Melanesia. The single instance of **k-kn** is of uncertain nature.

H.

The foregoing tables record a considerable number of mutation forms for the aspiration in Indonesia. For the mutation **h-s**, no less than twenty-two languages afford examples; yet on closer inspection it will appear that in the latter case but three vocables are at all involved, and that six vocables only are involved in the whole range of mutation of the aspirate. We feel justified, therefore, in regarding this as partaking more of word quality than of speech endowment. In Polynesia the aspiration has all but vanished; comparison of mutant forms, therefore, would be futile, the only forms common to the three families being **h-s** and extinction. Melanesia, in strong contrast with each family, shows a marked tendency to employ the aspiration in its proper function; over an equal and interlacing area it follows the **h-s** mutation. Common to Indonesia and Melanesia are these, **h-t**, **h-d**, and **h-j**, the two latter being variants upon the primal **h-t** mutation; the vocables involved in these changes in Indonesia are similarly involved in Melanesia, which has a few in addition of its own. Mutations peculiar to Indonesia are the following: **h-l**, **h—**, **h-m**, an upward movement in the series, discoverable only in the two vocables recorded in our data under numbers 47 and 278; regarding *ndr*, as so frequently, in the light of an effort to compass the **r** grasseyé, **h-ndr** (Malagasy 47) falls into this group. In Kisa 278 **h-ng** is explicable as the upward shift **h-n** (which is nowhere discoverable), upon which is added the rearward shift **n-ng**; confirmation being found in our record of the latter mutation in that speech.

S.

The sibilant is better retained in Indonesia than in Polynesia, a facility which it shares with Melanesia. The mutation common to the three families is **s-h**, normal to at least eight Polynesian languages, far less frequent in Melanesia, and in Indonesia affecting but seven vocables in six languages. Of the mutations common to Indonesia and Melanesia, **s-r** (found in Malagasy and Java 298) rests doubtfully on Tanna 337; and **s-t** is found in Alite and Wango in the same 337. Wholly Indonesian are **s-ch**, **s-j**, **s-d**, but they group naturally with **s-t**. **s-n** (Malagasy 344) lacks confirmation. **s-ng** (Togean 298), however, seems quite feasible. **s-g** (Malay 132) is very doubtful.

T.

Common to the three families are the mutations *t-s* and extinction. The former is quite rare in Polynesia, not particularly frequent in Melanesia, and in Indonesia involves but five vocables in four languages, one of these being similarly affected in four of the Melanesian languages.

t-k is the rule in Hawaii, rapidly becoming normal in Samoa, well established in Melanesia, and somewhat common in Indonesia. *t-j* is well established in Tonga; Melanesia shows it in Baki and Malekula; its use in Indonesia is but slight; with it should be grouped the *t-ch* of Malay, *t-tj* of Bugi, and *t-nch* of Batak.

For the extinction of *t* we muster but a single example in Polynesia (Marquesas 350), quite a respectable number of instances in Melanesia, but its Indonesian record is almost exclusively written in 217, a doubtful case as will be seen in the discussion of the note thereupon.

In the forms common to Indonesia and Melanesia *t-d* is the simplest variant, rather widely (including *t-nd*) disseminated in Melanesia, in Indonesia involving but three vocables in six languages. *t-m* in both families rests wholly upon the doubtful 217. *t-n* in Melanesia is found only in New Ireland 329; in Indonesia it rests soundly on 346 (Java and Kayan) and doubtfully on 217.

Of forms wholly Indonesian, *t-nt* is not infrequent and is understood as a nasal reinforcement of the mute. *t-ts* and *t-z* are met with but once apiece, both in Malagasy. *t-h* (once in Satawal) may be regarded as a secondary mutation of the *t-s* hitherto noted. For *t-ndr* we find but one example, in the Malagasy, yet it is quite satisfactory. *t-g*, a violent mutation, rests upon a single vocable (352) in Galela, Gani, and Tidore.

M.

The mutations of *m* need scarcely engage our attention in this rapid review. Polynesia affords but a single instance; in Indonesia but five vocables are involved; even in Melanesian crudity of speech *m* is almost constant.

V.

The *v*-mutations common to all three families are *v-w* and *v-h*. In Polynesia *v-w* has become normal in Maori, Hawaii, and Viti; in Melanesia it is satisfactorily established over a wide area or several areas interlaced by this mutation; in Indonesia it rests almost wholly on *vai* (291), a word quality at best. The Indonesian *v-h* rests wholly upon this *vai*, in a single instance; it is found in Melanesia in but one vocable in two languages; our Polynesian data afford us only three instances.

Of the forms common to Indonesia and Melanesia *v-f* is scantily represented in either; *v-b* in a solitary Malay instance is rather more common in Melanesia; *v-p*, once in Malay, occurs in but two vocables in Melanesia; and *v* extinct is represented in Melanesia by one vocable in two languages and in Indonesia by the somewhat doubtful Malay and Champa identifications of *vai*.

F.

In Polynesia the most common *f*-mutations are *f-h*, normal in Hawaii, Mangareva, Maori, and Tongarewa; and *f* extinct, normal in Bukakuka, Mangaia, and Rarotonga. In Indonesia *f-h* involves but six vocables in fifteen languages, in Melanesia it is more frequent. The extinction of *f* in Indonesia is found in four vocables in seven languages, in Melanesia in eight vocables in eight languages.

f-b is met with but twice in Polynesia; including *f-mb*, it is rather more common in Melanesia, is frequent in Malay and, with narrower application, quite generally extended over Indonesia. Closely associated with this is *f-p*, twice appearing in a single vocable in Polynesia, widely extended in several Melanesian instances, frequent in Malay, and of considerable extent in other Indonesian languages. *f-v* is normal in Viti; in all the rest of Polynesia involves but five vocables in eight languages; is very common in Melanesia; in Indonesia is found several times in Malagasy and rarely in Malaysia. *f-w*, once met with in two Polynesian languages, is very common in Melanesia; in Indonesia is found several times in Java and rarely in seven other languages. *f-s* is common to Indonesia and Melanesia, but is rare in each. *f-ch* is peculiar to Indonesia and rests upon a single and satisfactory example, Bouton 259. The *f-m* mutation (214) is most uncertain.

P.

The only mutation common to the three families is *p-b*. For this Polynesia yields but few examples; including *p-mb* it is by far the most frequent Melanesian variant; it is frequent in Malay and narrowly extends to ten other languages of Indonesia. *p-f* appears in but a single Melanesian example; in a single vocable it appears in four languages of the Malay Archipelago and doubtfully once in Malagasy. *p-v* has a somewhat wide distribution in Melanesia, but is rare in Indonesia. *p-w* appears once in Gilolo and in the same vocable in the New Hebrides, in another in Buka. The extinction of *p* involves the same vocable in three Indonesian and one Melanesian languages.

In the Indonesian check-list I have distinguished in bold-faced type the vocables which appear in Malayan tongues with the quality factor of recognizability by the Samoan, of which I have made such

use in treating of the Melanesian languages. Beyond this record of quality I hesitate to tread upon a field already so well cultivated by its own specialists; yet in so far as this area is involved in the erection of a Malayo-Polynesian speech family it is a fair field for the Sawaiori student. Since we have now brought one ethnic swarm of Polynesian voyagers back to the threshold of Indonesia at two doorways respectively, and have made it plain that the later Tonga-fiti swarm has found its exit elsewhere than at these identified portals, we are amply justified in our examination of Indonesia so long as our search is restricted to the replevin of Sawaiori material.

The prominent numerals in the preceding list make it wholly manifest that the Polynesian and the Indonesian have at some place and at some time been in intimate contact. That this place of intermingling was not the Pacific is equally manifest, for the Pacific languages contain no elements of Indonesian origin save this scanty collection picked out of Polynesian and Melanesian. A second line of proof lies in the consistent tradition of the Polynesians that they came over seas on a long voyage from the west.

Restricted, then, to Indonesia as the place of mingling, we must first examine the history of the two races. Of the Malay race we know, for their records of their own history show it, that Indonesia was not the place of their origin. Upon it they are intruders; from the Asiatic main they came by the easy path of the Malay Peninsula. So far as the traditions of Java can be reduced to a measure of synchronism, we can fix Java as uninhabited by Malaysians about 400 B. C., and a century later settled by 20,000 families emigrating from northwest India under Arishtan Shar and dispersing to Malabar, the Maldives and Madagascar; a large emigration from the Panjâb to the archipelago between 200 and 150 B. C.; and by 125 B. C. the archipelago overrun with these races.

As concerns the Sawaiori we lack all but the most indefinite information before their sojourn in Indonesia. We do not regard them as autochthons, for their traditions call for a migration yet earlier. But we are fairly entitled to regard them as in possession of the islands from Sumatra to the Philippines at the time of the Malaysian swarm. All indicia point to their retreat before the swarm advancing upon their western flank, the only lines of retreat open to them being in the eastern quadrants.

It is difficult for us to arrive at the comprehension of the expulsion of a race from its home. We have to go back to rude times to find ground for the belief that such things can be, to the swarming of the Huns upon Europe reported to us in the testimony of eye-witnesses and sufferers at the bloody hands of Attila. Without detail we have accepted, with dull imaginations and no great comprehension, the westward movement of the Aryan races.

Such movements we denominate ethnic swarms; a convenient designation! no hesitation has been felt in employing it in the foregoing chapters. But in denomination do we really describe? In calling the movement of the Sawaiori an ethnic swarm do we get sight of the nature of the movement?

In the hydraulic physics of geography Niagaras are rare; few streams go tumbling over cliffs in a mass; the course of the greatest rivers is marked by many an eddy, many a backwater, many a pool where motion scarcely appears. It is only in the errant fancy of the runaway child that tired feet on a weary way will at last bring him to a real jumping-off place. A stream of human migration can only flow in succeeding waves; many an eddy current will bear on a new destination.

Particularly must such have been the case with the expulsion of the Sawaiori before the Malay. In bulk and in the end it did indeed become a great ethnic swarm. In detail and in the performance it could have been no more than affairs of outposts.

The genius of Polynesian culture has nowhere as yet touched the idea of a national life. Samoa is almost singular in the possession of a collective name for its archipelago; the Samoan, the Viti, the Marquesan, and the Maori are alone in the possession of national names. Civic righteousness goes not beyond the village; village does not go to the relief of village in distress; there is even now nowhere a nation to arise in unity to set a bold and united front against an invader. Each tiny village makes its own defense. Victorious it holds its ground until the next attack; defeated it is a sufficiently mobile unit to set forth in search of a new home. We must remember that such were the conditions of the Sawaiori in the archipelago when the Malay in a similar wise were advancing upon them.

Under such conditions there are three main possibilities. A Sawaiori village resists attack after attack, maintains its good defense, retains the little islet or the pleasant bay of some larger island which is its home, is surrounded by settlements of the alien race, in time peaceful relations arise. A Sawaiori village realizes that resistance is futile, puts out to sea, seeks a new home. A Sawaiori village, debellated in some sudden onfall or by the crush of overwhelming force, goes down in defeat, and the sole survivors, the noncombatant women and children, are incorporated with the conquerors.

The second event accounts for our wanderers over sea, those whose voyages we have traced through Melanesia and into their present Polynesian homes. The first and third events are to account for such speech community as may be found in Indonesia and Polynesia.

It is not a great community. There are very few items which are not included in the data here assembled. See what a small basis

it forms for the erection of a Malayo-Polynesian family. In the Malay itself, the speech of which we have the longest record and the fullest comprehension, there are but 75 vocables safely identified as common in these data to the two families. Making the most generous allowance, a lavish allowance, for the vocables which evaded compilation under the conditions of this research, we can only thus doubtfully find a community of 150 words.

We are to consider the source of this petty common vocabulary. In the analysis of the possibilities it may have been borrowed from Indonesia by the Sawaiori during their joint occupancy of that area; it may have been delivered to each from a common source. It may have been contributed by the Sawaiori to their Malaysian conquerors, by such of the Sawaiori as persisted as inclusions in the Indonesian settlement, it being well understood that sooner or later they were absorbed in the alien culture and outside this linguistic record have left no mark, or at best a scarcely measurable trace.

If the Malay peoples advancing upon the Sawaiori peoples whom they found in possession of the islands of the Indian Archipelago forced their vocables upon the folk whom it was their pleasure and to their interest to scatter before them, then we are at an utter loss to comprehend the nature of such intercourse, for it is not in one generation nor yet in three that a people adopts any considerable element of an alien speech. Furthermore, if the Sawaiori borrowed directly from the Indonesian, incomprehensible as such a contingency is, we should expect to find the greatest range of variety, the widest divergence from phonetic principles, among the several divisions of the borrowing race, the closest uniformity among the lenders. Yet in the case of each of these seventy-five vocables here discussed the Polynesian keeps the word practically without alteration; in Indonesia the range of variety is enormous. The nature of the Indonesian variety is plain to see in the phonetic tables heretofore drafted.

We note three types, and careful study of the tables will show that all variants fall under one or other of these types.

First: phonetic variation recognizable as a Polynesian type. This may mean that dialectic variation in the Sawaiori material existed at the time when the two races had the word in common, a very possible contingency. It may mean that in the word itself was a disposition or motion toward a certain type of mutation which was carried over with the loan, a contingency almost impossible, for we have yet to learn of an instinct in the word; the *Sprachgeist* resides in the speaker.

Second: incorporation upon the common stem of formative elements distinctively Malaysian. This sort of thing is very common in all speech, markedly characteristic of our own English in its word-pilfering from every source.

Third: modification of the common stem by mutation unusual to the Indonesian phonetic and probably representing the resultant of an effort to reproduce foreign sounds difficult to the borrower's vocal organs.

Similarly we should expect to find a word delivered by the Malaysians to the Sawaiori diminishing in frequency along the wide eastern extent of the migration, practically constant in Indonesia itself. The answer thereto is patent in the check-list: Polynesia holds each of these words practically to its utmost east; it is Indonesia which shows great gaps.

We can not, therefore, regard the common vocabulary as in any sort borrowed by Sawaiori from Indonesia.

To the theory of derivation from a common parent the objections are insuperable. A common parent would have delivered a greater community of vocabulary, would have delivered a grammatical system that would show some interrelation between the two branches of the family. There is absolutely no record of a speech of man which contains these few vocables which Polynesia and Indonesia share, for it must be plain long ere this point is reached that the Semitic theory has no sound base.

The third possibility is that to which alone the objections are so few and so slight as readily to yield to the study of the problem, namely, that the community of vocabulary is Indonesian borrowing from Sawaiori. How this might be brought about has sufficiently been indicated already in the consideration of the nature and extent of the Sawaiori expulsion.

The indication of quality of such borrowed material presented in the check-list affords more matter of interest. As in our study of the Melanesian traverse it indicates by lines of higher quality the lines of travel.

Assuming, and this the well-recorded traditions of Java warrant—assuming the appulse of the advancing Malaysians as delivered upon the islands of the archipelago by the convenient way of the Malay Peninsula, Sumatra first would feel the shock, and Java next in practically undiminished volume. From Java two eastward ways lie out like a <. The northern line, following the north shore of Borneo, leads directly to the Philippines; following the south shore of that great island leads equally to the Philippines in their southern extent, but affords many opportunities of deviation by Celebes toward Gilolo northward and toward Buru and Ceram in a southerly course, and there the flight would be stopped by the inhospitality of New Guinea with the obstacle of its fierce and immiscible Papuan race.

The southern line leads directly into the Arafura Sea and Torres Straits. The halting-places are such islands as Bali, Lombok, Rotti,

Sambâwa, Timor, and lesser groups yet farther east. In the Arafura Sea the southern line would be joined by such of the fugitives along the northern line as deviated on the Celebes-Buru-Ceram course and were turned still further away by New Guinea.

New Guinea is no theoretical obstacle. We find less trace of the Sawaiori on its almost continental mass than upon any spot of land which their canoes could have reached in the flight. Even up to the present day the Malays, for two millenniums holding all of Indonesia and voyaging hither and yon for the equal joys of fighting and of trading, have succeeded in making no permanent lodgment upon the Papuan shore.

The Sawaiori flight out of Indonesia inverts the seasonal migration of the geese—its < opens forward. Thus parted, approximately at Java, it is to be a long flight before those diverging lines come together, not until Samoa is reached and a new home for the united race, for such at least as have escaped the infinite perils of unknown seas. It will be recalled that in the study of the migration through Melanesia the material under examination was assembled to prove the existence of a northern and a southern track, the Samoa and the Viti streams respectively, one emerging from Indonesia through an eastern portal in the Bismarck Archipelago, the other through a southern portal in Torres Straits.

The latter is readily recognizable as the direct production of the southern line of flight in Indonesia. If we examine such vocables as exhibit a difference between the two streams in Melanesia we shall find that those which characterize the northern stream find their greatest frequency, preserve the highest quality, in the several languages of the Philippine Archipelago, Bicol, Ilocan, Magindano, Pampangas, Sulu, Tagalog, Visayan and others from which our material is less complete.

It seems that now it is time to relinquish the term Malayo-Polynesian. There is neither ethnic nor linguistic unity. If the Indonesians in the paucity of their original speech have borrowed some 150 vocables from their victims, if they have been willing to take even their numerals from a conquered and fugitive race, it does not seem that they are entitled to be bracketed, and that with the honors of first mention, with a distinct family of speech. The Polynesian is an older speech than the Indonesian, one that has been carried greater distances of sea and land than even our Aryan until after centuries the Aryans grew bold enough to conquer the sea; yet uncounted generations earlier the sea had been the easy path for the Sawaiori to come to his Polynesian own.

CHAPTER IX.

THE SAWAIORI BEGINNING RESTS UNKNOWN.

Check-list of the Semitic words for which affinity has been sought—
Failure of the effort to identify this material with Sawaiori stock—
The reasons lie in false definitions and ignorance of phonetic principles—The Semitic does not conform to the laws of the family—
Summation of the results of this inquiry—The two Sawaiori swarms,
the earlier through Melanesia, the latter not yet discovered on the
face of the trackless sea—The double migration track in the western
Pacific—The problem of the Melanesians has been considered only
in so far as they have been affected by the wandering Sawaiori—End
of the classification which has joined Malay and Polynesian—The be-
ginning of the great Polynesian race is lost in westward and empty sea.

As in the earlier chapters, we provide a check-list of the various Semitic identifications sought to be established by Dr. Macdonald in the data here collated. Thus those still curious in the further examination of the theme may follow the topic back to the several languages which he has involved in the elucidation of his theory.

Arabic . .	13	17	18	19	21	22	23	25	26	29	30	31	32	34
	35	36	37	38	42	43	44	45	46	47	80	83	84	85
	86	88	89	90	91	92	93	97	98	99	100	101	102	103
	104	105	106	107	108	110	111	112	114	116	117	120	133	135
	136	137	138	139	140	142	143	144	145	146	150	151	152	153
	154	156	158	160	162	164	165	166	168	170	171	172	173	174
	175	176	178	180	181	182	183	184	185	186	187	188	189	192
	193	194	195	196	197	198	199	200	202	205	206	207	210	211
	212	220	221	222	224	225	226	227	228	229	231	232	234	235
	236	237	238	239	240	241	242	243	244	245	246	247	249	250
	251	252	253	254	255	256	257	258	259	260	262	263	264	265
	266	267	268	269	270	271	272	273	274	275	276	277	278	279
	280	281	282	283	284	285	287	288	289	295	296	297	298	299
	301	303	304	305	306	309	311	312	313	314	315	316	317	318
	319	321	322	323	324	325	326	327	328	329	330	331	332	333
	334	335	336	337	339	340	341	342	343	344	345	346	348	349
	350	351	352	353	354	355	356	358	359	361	363	364	365	
Hebrew . .	11	14	15	19	20	21	27	28	32	38	42	46	81	82
	86	90	91	95	96	98	106	118	134	141	145	146	147	148
	156	157	161	163	171	177	179	181	188	189	190	193	198	201
	203	204	208	209	211	212	218	219	223	224	225	233	235	236
	239	242	248	253	269	271	276	279	282	286	288	289	291	292
	293	294	298	300	301	303	304	307	308	310	311	314	315	317
	319	320	321	326	331	333	336	338	340	343	344	347	350	356
	357	358	360	364										
Ethiopic .	11	12	27	44	87	98	113	115	119	136	149	156	160	173
	189	191	230	243	248	261	264	276	287	291	294	303	308	311
	321	333	342	358	362									
Syriac . . .	16	94	101	106	159	171	177	179	188	248	267	282	298	302
	317	321	331	333	340	343	350							
Chaldee . .	33	160	303	321	350									
Aramaic . .	203	208	338	360										
Amharic . .	280	329	363											
Mahri . . .	167	312												
Sokotra . .	312													
Tigre	119													



Beyond this we may not venture. The effort has been made to tabulate for each of these languages a scheme of consonant mutation, and the effort has proved vain. The trouble begins even earlier than the tabulation of variant forms.

There are cases in which there is a resemblance of form between some Semitic vocable and some vocable in Efaté and Melanesia and Polynesia. If to the form resemblance were added correspondence in signification, then we should not truly in any one instance have proof that though widely separated in space they are homogenetic. A single instance will suffice as well as a thousand to show the utter lack of evidential value in such a case. The Hawaiian *like* means to resemble, to be like, yet no one has yet arisen to predicate upon the double identity of form and sense a theory that Hawaiian and English derive from the same source, except in so far as Fornander's project might be susceptible of extension to such an absurdity.

A long catena of such dual resemblances of the common element in Melanesian and Polynesian with a Semitic parent speech would add confirmation with each new link as welded to the chain. Yet the weakness of any chain is in its weakest link; that weakness measures its utmost strength. Many of these links have been vitiated by the falsity in definition hitherto animadverted upon. We have pointed out instance upon instance in which through ignorance, some through manifest design, the definition of Efaté vocables has been distorted for the clear purpose of establishing a sense resemblance where a form resemblance has already been noted, either by eyesight or in a rather fertile imagination. Losing our faith in this link and in that we can place no trust at all in the chain. So much for that.

We find Semitic trilaterals proposed as the parents of vocables in our Pacific islands in which the consonantal skeleton consists of but a single consonant, or of two. We find island vocables having a skeleton of three consonants proposed as in direct descent from Semitic stems in which it is impossible to discover a trace of more than two consonants, sometimes not even two. We find some Semitic trilaterals identified with triconsonantal stems in island languages in which the order of the consonants is deranged. We find some Semitic trilaterals identified with triconsonantal island stems in which the first Semitic element has vanished, the second and third are respectively first and second in the island stem, to which is added a third which corresponds to nothing in the Semitic; expressed diagrammatically it is sought to establish ABC as equal to BCD.

In vain we strive to unravel Dr. Macdonald's attempts at consistent explanation. These things remain a tissue of irreconcilables, and the explanation but serves the more to confound them.

Premitting as hopeless the task of comprehending these anomalies so gravely proposed and so argued with what must be regarded

as fabrications which will stand under no law of evidence, assuming that these obliquities can be made straight, we are to encounter a new jungle of difficulties in the examination of phonetic mutation.

We have been able to develop for the Polynesian a very simple system. In the primary and even in the secondary Melanesian borrowings of Sawaiori loan material we have developed a system that seems to hold good as far as it can be put to the test, and this despite the confusions of the attempt of the Melanesians to catch in unaccustomed ears and to reproduce with untrained organs of speech, above all the lips, sounds unfamiliar. We have subjected the diffusion of these elements in various Indonesian languages to the same analysis.

What principle or principles of mutation have we been able to discover in this trine examination as a factor common to the three families which use this common stock of vocables and which possess them in fee or as bailee? They are but few, these principles; correspondingly they are simple:

1. The nasals tend toward a mutation, if any, backward in the direction of the glottis. Less frequent is variety in the series to which each belongs. The mutation is horizontal rather than vertical.
2. The consonants in each of the series tend normally to mutation downward in the series.
3. At the foot of each series, palatal, lingual, labial, the mutes tend to mutation upward in the series, surd mute to sonant mute, mutes to spirants.
4. Mutation *extra seriem*, horizontal mutation, is rare outside of the nasals, most such cases being explicable as mutation to the aspiration in the first instance and then secondarily from the floating aspiration to some adjacent series.

How far do the proposed Semitic identifications conform to these broad principles which, in the intricate detail of the study put upon them in the foregoing chapters, have been established as perspicuously as simply?

It would be idle to attempt to list all the concordances and equally the discrepancies of the Semitic offered in identification when measured by these established principles. We note from the Arabic, from which Dr. Macdonald has drawn most largely, the proposed mutations in but two of the representative Polynesian consonants, **t** as being central in the diagram and **f** as representing the labial series and with it the maximum mutability. For each mutation we note but a single instance in reference; it seems that there will be no lively desire to seek out more.

Polynesian **t** may become in Arabic: *t* (107), *ṭ* (44), *d* (38), *s* (35), *ṣ* (160), *z* (267), *ḥ* (36), *n* (37), *gr* (247), *rd* (306), '(356).

Polynesian **f** may become: *f* (86), *b* (83), *m* (93), *n* (170), *w* (296), *y* (296).

We fail to see how such movement, even if established on far better ground than we have here, can be brought into harmony with the foregoing briefly stated principles.

These principles are fundamental in the three speech families which share the possession of this common element in the vocabulary. A fourth family, claiming admission to the clan yet showing so plainly that it fails to conform to the law of the household, must knock long at the door and long in vain.

One more point and we are done with Dr. Macdonald and his Semitic origins. If he has proved his thesis his proof must exclude all use of the same materials to prove some other origin. There is another Richmond in the field, long earlier in the field, and he has been just as substantial and just as stout in defense of his theory that the Polynesians stem in the pre-Sanskrit Aryans. In the third volume of Judge Fornander's "Polynesian Race" will be found dozens of instances in which he uses the same Polynesian and the same Indonesian material that Dr. Macdonald groups about his Melanesian data for the proof of Semitic origin. Yet employing the same material Fornander sees naught but Aryan source.

Let us compare the two lines of argument in but a single instance to serve as illustration. Brevity will best be conserved by pinning such comparison on 243. In this Dr. Macdonald carries the Samoan *fili*, to plait, through Melanesian and Indonesian to the Arabic *fatala* and *fatl'* and the Ethiopic *fatlat*, to twist, to spin. Hear now Judge Fornander as champion of the other cause:*

Greek, *εἶλω*, to roll up, to press together, pass to and fro, to wind, turn round; *ἐλίσσω*, turn round or about, roll, whirl; *ἐλιξ*, twisted, curled; *s*, anything of a spiral shape, twist, curl, coil; *ῥίλω*, to roll, of the eyes, to squint, look askance; *ῥιός*, squinting; *ῥιός*, a rope, band; *ῥιγξ*, a whirlpool.

Sanskrit, *vel*, *vehl*, to shake, tremble; *vellita*, crooked; *anu-vellita*, a bandage. To this Sanskrit *vel* Benfey refers the Greek *εἶλω*, the Latin *volvo*, and the Gothic *walojan*. Liddell and Scott also incline to connect *εἶλω* and *volvo* with the same root. To me it would seem as if the Sanskrit *vrij*, whose "original signification," Benfey says, is "to bend," and the Sanskrit *vit*, whose "original signification," Benfey says, is "to turn," were nearer akin to the primary form from which the Greek *εἶλω*, *ῥίλω*, and the Polynesian *hili*, *wiri*, descend: that primary form being *vri*, now lost to the Sanskrit, with a primary sense of to bend, twist, turn over, braid, and of which *vel*, *vell*, or *vehl*, is possibly another secondary and attenuated form. With such a Sanskrit *vri*, surviving in *vrij* and *vit*, the derivation of the Latin *filum*, thread, as twisted, spun; of the Latin *varus*, bent asunder, parting from each other, *varix*, crookedness; of the Saxon *wile*, deceit; of the Swedish *willa*, confusion, error, *wilse*, astray, becomes easy and intelligible.

*3 Polynesian Race, 117.

It is impossible that each can be right in his deduction. To those who have followed thus far this review of the data it will seem far from impossible that each is in equal error.

In summation we are to consider what facts are established in our knowledge of the earlier history of the Polynesians.

A. IN POLYNESIA.

We have the excellent authority of concurrence of tradition, and to those who can bring themselves into harmony with the Polynesian manner of thought their tradition has the validity of history. We shall find this history most succinctly set forth in the volume of "Hawaiki" to which reference has been made earlier in this work, and we shall find its several incidents as derived from diverse sources most satisfactorily synchronized and intelligently discussed in the same work. We have in the foregoing pages and in the data upon which they are based a very considerable mass of language history. Fortunately we are not under the necessity of estimating the comparative moment of each of these sources of information. That would be a problem as interesting as intricate in case of conflict. In our studies they run in confirmation and reciprocal corroboration. For every inference to which the philological line may lead us we find support in this fragment or that of some tradition; for every statement set down in the tradition we find such corroboration in the philological analysis that the legend handed down in memory is proved to have the value of history.

Confirmed and upheld thus doubly at every point we are assured of the following facts in Polynesia:

1. Nuclear Polynesia (Samoa the nucleus and Niuē, Tonga, Viti, describing the perimeter) was under settlement by Polynesians from a date so remote that they had lost all direct memory of an anterior movement thither. They held themselves autochthons, and in the greater groups had creation myths in which land first emerged from the tireless sea, their own the first of lands and they upon it the first of men. These we style the Proto-Samoans. The indirect tradition of a former home told no rearward tale to them. It is only by inference and through digestion of many such traditions that we are able to read into the consistent belief in the westward home of the spirit a dim record of an earlier abiding-place. The dead go home, home to a home that the living have long ceased to remember; blessed are the dead in their direction sense.

2. Upon this Proto-Samoan settlement came a later wave of migration of the same race. This second migration held its footing upon Nuclear Polynesia through a period whose duration we are quite without the data to estimate. In general the later migrants behaved so harshly to the original inhabitants, albeit of their own

race and almost word for word of the same speech, as to provoke reprisals. For these later migrants we have adopted the name by which they are known in Samoan history, the Tongafiti, it being understood that the present names of the archipelagoes of Tonga and Fiji (Viti or Fiti) did not supply the name, but are derived therefrom. From skirmish to pitched engagement these reprisals grew as the Proto-Samoans, driven from the shore to inner recesses of their islands, recovered strength in resistance. At last came the critical battle of Matamatamē, somewhere about 1200 of our era or a little earlier. The Tongafiti were expelled from Samoa and began their eastward wanderings as far as Hawaii and New Zealand, the era of the great voyages.

3. Nowhere in the present data are we able to pick up the track of the Tongafiti prior to their descent upon Nuclear Polynesia. We have made it clear that they did not follow the Melanesian route between Indonesia and Polynesia. It must remain for the students of the Tongafiti collaterals to discover their route; our concern in this study has been to identify the migration that did sweep along the Melanesian chain.

At this point it is profitable to add the comment of S. Percy Smith upon a syllabus of my reasons for rejecting the Tongafiti migration from the Melanesian area:

The Solomon-New Hebrides is not the only route open to them; they may have stretched across from the north shore of New Guinea, or even from the northern Solomons, to the Gilbert, Ellice or Phoenix Group and so down to Viti. But for all that, until I see your argument, I must at present think they came by way of the Solomon and Santa Cruz groups to Futuna. The specimens I have seen of the dialect of Sikayana show a close connection with Maori and Rarotongan. Just consider this case: the Tongafiti came by the north of New Guinea following the first Samoan route, and as they came across their own people in various places along this route, such as in the Solomons, Santa Cruz and elsewhere, they would learn of former migrations having gone farther south and followed without delay, leaving none of their dialect behind among their fellow-countrymen they fell in with en route.

The general argument has already been advanced at length. Specifically I note in comment on the foregoing interesting note, as follows. Our data in Melanesia show a marked absence of traces of the vocables and mutation forms which characterize the Tongafiti in distinction from the Proto-Samoan. Furthermore the Tongafiti have left abundant traces of their passage through Nuclear Polynesia and all the more on that account is it inconceivable that they should have quite failed to affect their congeners in Melanesia if they had passed that way. I feel confident that a similarly careful examination of the islands along the Line will disclose the Tongafiti track.

B. IN MELANESIA.

From the Isle of Pines, which at the bottom of New Caledonia sets the full stop to Melanesia, to the Admiralty Islands, which draw the northern line of that island province around and overlapping eastern New Guinea, we find three classes meeting our investigation.

In the first is grouped the islands of Polynesia's western verge in which, ethnically and philologically, we are dealing with Polynesians as surely as if we were in Samoa or Te Pito te Henua at the eastern limit; with this class, and because of its established Polynesian position, we have little concern in the present series of studies.

The last class contains all those islands, if any there be, which represent Melanesia uncontaminated by a Polynesian influence even at second or third remove. This class also is removed from our present study.

The central class is that with which we concern ourselves here, those many Melanesian lands in which the language record enables us to trace a Polynesian connection in speech, the amount and the quality of such contamination varying largely from group to group and from island to island and from the shore to the interior of an island. It is upon this class that our attention is fixed in this inquiry. It has been our task to analyze and identify each item of the contamination in so far as we possess the record with which to study it. It has been our duty to pass definitely upon each such item, to reject or to admit it to Polynesian kinship as the facts may seem to warrant. From the items so admitted we have sought to comprehend the system of variation from the true Polynesian form to which they have been subjected in passing into alien use. We have massed these items to the proof that they are loan words borrowed by Melanesia from Polynesians. We have sought to account for the contact of the two races in this area. In following up and, it is hoped, plainly establishing the overrunning of Melanesia by a Polynesian migration swarm, we have essayed to direct attention upon two parallel tracks of swarming, parted far to the west and destined not to reunite until a long eastward traverse has been concluded.

With the Melanesians themselves we have nothing to do save in so far as we find them recording the passage of the Proto-Samoans, a passage as to which the Polynesians have retained no direct memory. It suffices here to state that the students best acquainted with them regard them as a mixed race, the Polynesian admixture in blood being more a matter of inference than a result of anthropometrical investigation. There seems good reason to believe that under the Polynesian admixture there is not one but several races. Up to the present, on rather better grounds now than could be the case in even the recent past, there seems to be a line of demarcation quite sharply drawn between the Melanesians of the islands and the Papuans

of New Guinea. To this conclusion point the brilliant studies of Sidney H. Ray upon the Melanesian population of Torres Straits. The same divergence, even within the most narrow limits, is pointed out by Pastor Hanke as existing on the shores of Astrolabe Bay on the northern coast of New Guinea; the map accompanying his Bongu dictionary, unfortunately without a scale for the measurement of distances, shows Melanesian languages upon the offshore islands, on the coast Melanesian languages in three areas abruptly separated by two Papuan areas. It answers our purpose in these studies to observe that the languages of Melanesia are not Polynesian, no matter how much they may differ the one from the other.

In general, and this note must be understood as of equal applicability to the Indonesian division of the topic, the culture plane of the peoples is the predeterminant factor in regulation of the nature and amount of the loan material which they may assume, the phonetic system of their own speech functions in the degree of the assimilation to which they may subject the matter thus assumed. In this work I have refrained from consideration of the former factor. The data here presented, offering a record of probably very nearly all the loan material, should readily provide the stuff from which the student of manners might construct the history of the difference in the arts which marked the Melanesian as lower than the race of hardy and brilliant adventurers who swept past his islands these ages ago and brought to him a glimpse of a world where achievement ran higher.

So far as relates to the modification of the loan material in the process of assimilation by the borrowing races I have been careful to draft a table of such modification for every one of the languages of which we have sufficient record, and in many cases I have supplemented this with a fuller discussion in the notes.

The conclusion to which I am led is that the element common to Melanesian and Polynesian is Polynesian material directly impressed upon the Melanesian by borrowing under stress of the lack of name for a new object or a new idea, or by the influence of some quirk of fashion, a principle no less operative in primitive man's mental equipment than it remains to the highest culture attainment of the summit races.

C. IN INDONESIA.

When we enter upon the island world to which New Guinea stands as the eastern barrier we find an immediate and a great decline in the element which has been found common to Melanesia and Polynesia. Only a few of the vocables in Melanesia for which we have discovered Polynesian affinities are found to carry that affinity back to Indonesia. Still fewer are the words which display an affinity

between Polynesia and Indonesia without having left a record of their passage through Melanesia.

The presence of these double and of these more common triple affinities has served as the basis for the erection of the Malayo-Polynesian speech family. That family was created by great scholars and has been supported by their followers no less great. One hesitates to deviate from the conclusions upon which there is substantial agreement of Humboldt, Bopp, Friedrich Müller, Max Müller, Whitney, and the generality of students of systematic philology.

Yet now I have the less hesitation. In preceding works, where topically, however, I was dealing only with the Polynesian, I found myself forced to set aside the earlier estimate of the character of the languages of the Pacific and to establish them as of the isolating class,* a position in which I am more and more confirmed as my studies go more deeply into the matter. Therefore I am ready to pronounce the decree of divorce upon Malay and Polynesian. Languages of different classes, of uncoordinate syntax, of irreconcilable vocabularies—too long have they been unequally yoked. In the present collection of data there is not a single item which is not most readily explicable as loan material, there is not one in which there can be mustered any proof that its source was Indonesian.

D. THE OLD HOME.

The material with which we have so long been engaged, and it is hoped not without profit and interest, leads us from Polynesia backward along Melanesia and to many a remote shore of the Malay Archipelago. Did the Polynesians have no earlier history? Was it in these warm islands that they became man and slowly acquired that control over certain muscles susceptible of high specialization in function which gave them speech?

A most interesting speculation. It has engaged the zeal of all such as have felt the attraction of this least contaminated of the races of men. Every shred of tradition has sedulously been studied for such record as it might reveal. The interpreters of these tradition-histories have been led back to Indonesia as distinctly as this mass of linguistic material has led us who have been studying it together. All paths lead to Indonesia as an early, a very early, home of the Sawaiori.

But backward?

Dr. Macdonald has toiled for a lifetime to prove a Semitic origin, a yet eastern home in the region to which the Bab el Mandeb is indeed a gateway. I can not find that his theory stands the test of examination.

*₂₇ American Journal of Philology, 38o.

Myself, I have fancied that from the inner content of many of the elemental words of the language I might reconstruct a vision of the geophysics of the earliest home, ancestral Hawaiki in the great sea of Kiwa. It was a pleasant speculation; almost I could see the old home. In casting about for a terrain which would in some sort correspond to this artificial cloude cuckooland I was led to pitch upon the Hadramaut, close to Dr. Macdonald's seat of origin. I have found pleasure, better yet it has been given me to find enduring profit in great joy, sweeping concentric circles of study upon the languages that ring about the Hadramaut in Arabia and across the straits in Africa. Yet nowhere have I found so much as a single word upon which I might rely in confirmation.

Fornander, with much labor, has sought to find the origin of the Polynesians in the origin of our own speech family. It has not seemed to any Polynesian student necessary to enter upon a detailed disproof of his argument; every item sufficiently disproves itself by the discovery of his complete lack of philological training and the language instinct.

The school of students of Polynesian origins, that unanswered "whence of the Maori," which has grown into enthusiastic existence in New Zealand, has been sedulous in this study, at times almost inspired. At present they are in general accord in regarding the Polynesian ancestral home as somewhere in the Indian peninsula, either in its great valleys of the Ganges and the Panjâb, or else upon the heights rising farther to the north. The best statement of this opinion is most lucidly and most compellingly set forth in Percy Smith's "Hawaiki."

I wish that I might take my stand with that rich scholarship which has proved such an inspiration to me in my work. In following out the only method which I feel sure in handling I can not go farther than the material in my hand will lead me. At Java, or thereabout, the last thread slips past. Up to that point I have followed the leading toward Pulotu whither the dead go, toward Hawaiki whence the living come, always westward with the words to go with me from land to land—now at last the tale of the words is done.

I may go no farther. In Java I halt, and Java may be in itself a Hawaiki. There is no further leading. Out yonder beyond my sight, out yonder over the unended sea and the sun going down, out and away whither my eyes tire with the strain of unavailing seeing, somewhere lies the Hawaiki of our vain search. There I would that I might see the canoes setting bravely forth with the rhythm of song and the pulse of paddles, bravely out on the great sea of Kiwa, their crews the forebears of that race of men who beyond all others made the sea their own, even to its uttermost islands.

APPENDIX I.

DATA AND NOTES.

EFATE-VITI.

1.

baso, to pierce.

Viti: *veso-ka*, id.

2.

bei, preposition connecting verbs with their objects; the final *i* belongs to the pronoun of the third person.

Viti: *vei*, to, from; used only before personal pronouns and personal names.

3.

kilakila, to be shy.

Viti: *kila*, to be wild (of animals), suspicious.

4.

malua, **mailua**, **malilua**, **malulu**, to do anything gently, to be in no hurry, to do after a time, by-and-by.

Viti: *malua*, to go gently, to be in no hurry, by-and-by; *vakamalua*, gently.

This may be found associable with *malum* 316.

5.

masere, to be torn.

 Viti: *kasere*, broken, loosed.

This falls more properly under note 21.

6.

mutrei (given as a variant of *mitei* 232), breadfruit fermented and preserved.

Viti: *mandrai*, bread, i. e., a cake of preserved breadfruit.

7.

sanga, **senga**, a crotch, a fork made by two branches; **sanga-fi**, to take hold of with a crotch or forked stick.

Viti: *sanga*, a crotch, the thighs, a pair of tongs; *sanga-va*, to take hold of with tongs.

8.

toki, to gather up one's things or pack up preparatory to flitting.

Viti: *toki*, to remove one's goods and residence.

EFATE-VITI-MALAY.

9.

bara-ti, to bind together; **faràti**, sticks fastened above and upon the rafters of a house.

Viti: *vorati*, the wind beams or upper small cross-beams of a house.

Malay: *barot*, to gird, to bind around; *bàroti*, rafters.

10.

buta, blind (in *meta-buta*, lit. eye-dark).

Viti: *mbutò*, dark, darkness; *matāmbuto*, to become dizzy and fall, lit. eye-dark.

Malay: *buta*, blind.

EFATE-VITI-SEMITIC.

11.

bà, ba-si, fa, va, to come, to enter, to tread (to go upon), to tread upon.

Viti: *va-tha*, to tread upon.

Hebrew: *bo, ba*. Ethiopic: *bawi*, to come, to enter.

This naturally suggests an association with *bano* (147) to go. The Efaté *ba-si* implies a final *s*-radical, which implication is further hinted by Viti *vatha*, for *s-th* is a not infrequent mutation. In *bano*, however, the radical *n* is constant throughout Melanesia with the exception of a New Hebridean (Mota-Ambrym-Sesake-Eromanga-Pak) and a Solomon (Nggela-Belaga) group, which have *va*. In view of the constancy of *n* in *bano* and the appearance of *s* in this item it is uncertain whether to regard this *bà* as a distinct root and to transfer from 147 the two *va* groups to association therewith, or to regard the latter as mere coincidences in the result of abrasion. With this *bà*, Dr. Macdonald associates as a dialectic form *mai* to come, which is, of course, nothing but the universal Polynesian directive.

12.

bila i, to pick up, to gather up anything, as fallen leaves, fruit, fish lying on the ground.

Viti: *vili*, to pick up fallen fruit or leaves.

Ethiopic: *'araya*, to gather, as fruit, herbs; to glean.

13.

bitelo, butol, bitol, to be hungry.

Viti: *vitolo*, hunger, to be hungry (an unusual dialectic word).

Nggela: *vitolo*, to hunger. Motu: *hitolo*, hunger.

Arabic: *ṭalaḥa, ṭoliḥa*, to have an empty belly.

The first classification of these data was based upon the comparative material afforded by the Efaté dictionary. Later research through other sources of information have in several items brought to light new data which interrupt the applicability of the class heading, as in this case. The serial number of the items, however, had by that time been so extensively employed in many calculations that it has seemed hardly worth the while to recast the arrangement and to provide a new notation.

Peculiar interest attaches to the entry which conveniently, yet inaccurately, is credited to the Motu. It is drawn from a vocabulary of 160 items collected by F. R. Barton and included in Seligmann's "Melanesians of British New Guinea." Captain Barton designates this vocabulary by the name "Lakatoi Language" and notes that it is "the trading language spoken by the Elema natives and their visitors." In this remarkable lingua franca I have been able to identify no more than this item as having any association with the languages of our province. The *lakatoi* are the

composite vessels which set out from Motu laden with pots and sail westward to the Papuan communities across the Gulf of Papua, there to barter their wares at Elema and other ports for the sago of that country. This voyage, an adventure of annual argosies, is performed with great ceremony and much ritual, not the least of which formality is the employment of this language.

14.

bure, fure, to wash, to rub.

Viti: *mbore-a*, to scrape or wash the dirt off a thing, to brighten; a dialectic word.

Hebrew: *marak*, to rub, to polish, to cleanse by washing.

15.

fanau, bunu, to teach, to instruct, to preach.

Viti: *vunau*, to admonish, to harangue, to preach, a speech, reproof.

Hebrew: *'anah*, to harangue, to proclaim, to preach, to admonish.

16.

ka, k', tense sign, past.

Viti: *ka*, id.

Syriac: *ka, ga*, id.

17.

kilakila, knowing, sagacious.

Viti: *kilā*, to know, to understand, to acknowledge.

Arabic: *'akāla, 'akil*', to be intelligent, prudent, sagacious.

18.

lele, lili, to wind, to go around, to turn, to curve; **malele**, to be bent or curved, as a branch of a tree heavy with fruit.

Viti: *lele*, the end of a branch farthest from the body of a tree;

leletha, to bend a branch in order to gather the fruit on it.

Arabic: *lawā*, to wind, to bend, to turn.

19.

lume a, to wash (immerse), to dip.

Viti: *lomotha*, to dip, to dye, to daub the hair with ashes, to dip the head into urine to clean or stiffen the hair.

Hebrew: *šaba'*. Arabic: *šab'a*, to dip into, to immerse, to dye.

20.

saf i, bisab, bisif, to excel.

Viti: *sivia*, to outstrip, to exceed, to pass another, to get past or before, to surpass; *uasivi*, to exceed.

Hebrew: *yasaf*, to add, to increase, to surpass, to excel.

21.

sere, masere, to tear.

Viti: *sereka*, to untie, to unloose; *kasere*, broken, undone.

Arabic: *nasara*, to tear, to rend.

22.

seri, bakaseri, to loose a tabu.

Viti: *sereka*, to untie.

Hebrew: *sarah*, to loose.

23.

si, soi, to scrape.Viti: *soyā, soi*, to scrape off the skin of yams for boiling.Arabic: *saḥa'*, to scrape off.

24.

tefa ki, tefa-ngi, to put things in a series, to range.Viti: *tuva*, to place in regular order, to range.Arabic: *ṣaffa*, to set or place in order in a series, to arrange.

It is at least suggestive of association with Samoan *tufa*, to divide, to share out, to distribute. The Viti form readily consents.

Tonga: *tufa*, to divide, to portion out, to distribute. Niuē: *tufa-tufa*, to divide, to portion out. Uvea: *tufaki*, to distribute, to divide, a partition. Futuna: *tufaki*, to distribute, to divide, Fotuna: *no-tufa*, to give. Tahiti: *tufa*, to share or divide portions. Marquesas: *tuha*, to divide, to apportion. Rapanui, Mangareva: *tuha*, to divide, to share out. Maori: *tuwha*, to distribute, to apportion.

Nggela: *tutuva*, to distribute (food). Belaga: *tuva-lisa*, to apportion. Sesake: cf. *ga tova wango*, I cut pig.

In note 312 I have suggested the recurrence of this stem in the compound numeral of the *tavalima* series.

25.

tirikit, to begin to drop or spatter, of rain (*kit*, small).Viti: *tiri*, to drop, of liquids.Arabic: *s'als'ala*, to drip, to fall in drops.

This is properly included in 359.

26.

tu na, bones of fish.Viti: *ndua*, bone (dialectic).Arabic: *s'a'a*, to become spiky, to be rayed.

EFATE-VITI-MALAY-SEMITIC.

27.

bera, fera, to crumble, to fall to pieces.Viti: *vuruvuru*, a crumb, to crumble.

Malay: *âmbor, tabur*, to be scattered. Malagasy: *mahavera, miveraberaka*, to crumble.

Ethiopic: *farfur*, a crumb. Hebrew: *parṣor*, a crumb; *pur, par pīrṣer*, to break in pieces. Cf. 28.

28.

bori, boriuori-si, to break.Viti: *vorota*, to break, of brittle or thin things, as pots.Malagasy: *puritra*, to break.

Hebrew: *pōr, pur*, to break in pieces. Cf. 27.

29.

lita, liti, to crackle, to burst, to explode, as wood or a stone in the fire;
lita nakabu, a spark.

Viti: *lindi, thalindi*, to burst or explode, the report of an explosion
 or bursting, as of thunder or a stone in a heated oven; *lindi ni
 buka*, a spark.

Malay: *lâtok, lâtup, lâtub*, to crackle, to crepitate; *lâtum*, to boom,
 to give out a booming noise.

Arabic: *la'ata, la't, li'at*, to crackle, as water boiling.

30.

lubwa, to pour out.

Viti: *livia, talivi*, to pour gently or in a small stream, to spill.

Malay: *tumpah, mânumpah*, to spill, to shed, to pour out.

Arabic: *ṣabba*, to pour out.

In 154 the same Viti identification has been employed in a better set of
 sense resemblances.

31.

sabe-li, to beat, to slap.

Viti: *sambalaka*, to strike in a certain way, to slap.

Malay: *tampar*, to slap. Java: *tampel*, id.

Arabic: *ṣafa'a*, to beat, to slap.

32.

samit, samut, to beat, to chastise.

Viti: *samuta*, to beat, generally with a heavy stick.

Malay: *chamiti, chamati*, a whip or scourge.

Hebrew: *s'amat*, to strike, to smite. Arabic: *s'amat*, to whip.

The identification of the Malay entails the *s-ch* mutation, for which our
 material affords no confirmation save so much as may lie in 45.

33.

siba, suba, to break.

Viti: *sovetaka*, to break the head to pieces; *sovuta*, to break a hole
 in thin things.

Malay: *sumba, simba*, to break.

Chaldee: *s'ibeb*, to break in pieces; *s'iba*, a fragment.

We are to meet with no other instance of a *v-mb* mutation in Indonesia
 and only one (Malay 310) of *v-b*; the identification, therefore, lacks con-
 firmation.

34.

sori, to give.

Viti: *solia*, to give, to grant, to permit.

Malay: *sârah, srah*, to submit; *sârah kan*, to give.

Arabic: *ṣ'ara'a*, to submit, to give.

35.

tatalai, to warm oneself at the fire.

Viti: *tatalai*, id.

Malagasy: *mitulu*, id.

Arabic: *ṣala, ṣalyy'*, to warm, to be warmed at the fire.

36.

tiro, to sink, to roll down.Viti: *tiro, siro, sisiro*, to descend, to go down a steep or hill.Malay: *turun*, to go down.Arabic: *ḥadara, ḥudur'*, to descend, to put down.

37.

toto, tiso, to exude, as gum or juices from plants.Viti: *ti, titi, titiva*, to ooze, to flow gently down, as gum from a tree.Malay: *titik*, to exude. Malagasy: *mitete, mitate, tetevana*, id.Arabic: *naṣ'ṣ'a*, to exude.

38.

trôm, tom, turmeric, a reddish curry powder.Viti: *ndamu*, red, crimson, brown, dun.Malagasy: *tamutamu*, turmeric; *tumamutamu*, yellow.Arabic: *'adoma*, to be red. Hebrew: *'adamdom*, reddish.

EFATE-MELANESIAN-VITI.

39.

bati, tooth.Viti: *mbati*, tooth.Sesake: *mbati*, tooth. Epi: *bati*, id. Marina: *peti*, id.

Dr. Macdonald has considered this under two entries, yet with full appreciation that his *nabati* is this *bati* with the article. It will be found fully discussed in 259, where, however, the stem under examination is that of a different word and of much wider dissemination. This *bati* is confined to Viti and the central New Hebrides.

40.

bui na, bua na, backbone, tail, rump.Viti: *mbui*, tail.Sesake: *mbuena*, tail.

41.

mako, maka, offspring.Viti: *makumbu, mokumbu*, grandchild (*mbu*, grandmother).Tangoan Santo: *maka pi*, grandchild, offshoot of *pi* (grandfather).

EFATE-MELANESIAN-VITI-SEMITIC.

42.

fara, a sprouting coconut.Viti: *vara*, a coconut when filled with meat and ready to shoot.Motu: *vara*, to grow, to be born. Omba: *kmbwiri*, to grow.

Hebrew: *parah*, to burst forth (as the young from the womb), to sprout; *perah*, a sprout, a shoot. Arabic: *farh'*, offspring, sprout, shoot.

43.

loa, black, dirt.Viti: *loa*, black.Malekula Pangkumu: *roro*, dirty.Arabic: *lo'wat, lawla'*, blackness.

44.

taku na, the back.Viti: *ndaku*, the back.Epi: *taka*, the back. Malo: *tura*, id. Motu: *ndolu*, id.Ethiopic: *dahr*, posterior part; *dahari*, the last; *dahara*, to be after, to be behind. Arabic: *t'ahr'*, the back.

Dr. Macdonald finds kinship with Samoan *tua* the back. Neither that nor the Malo and Motu identifications can be sanctioned.

EFATE-MELANESIAN-VITI-MALAY-SEMITIC.

45.

bisa, fisa, basa, to speak.Nukuoro: *pasa*, to speak. Fotuna: *visau*, id.Viti: *vosa*, to speak.Sesake: *vasa*, to speak. Nggela: *bosa*, id.Malay: *bacha*, to read, recite, chant; *basa*, voice, speech. Tagalog: *basa*, to speak.Arabic: *nabasa*, to speak, to peep or chirp; *nabsat'*, a word.

An interesting suite, all the more because of the sparsity of the occurrence of the stem in each of the provinces. The proposed Semitic affinity contains at least one element which is not found at all in the Sawaiori.

46.

kan i, kanikani, to eat; **kanien**, food.Viti: *kana*, *kania*, to eat; *vakania*, to feed, to cause to eat; *veikanikani*, devouring one another; *kani*, *laukana*, edible.

Melanesia, all signifying to eat—Marina, Tubetube, Galavi, Boniki, Mukawa: *kani*. Sesake: *ganikani*. Galoma: *ganigani*. Belaga, Sinaugoro: *gani*. Rubi: *gania*. Gog, Merlav: *gan*. Nggela: *gana*, *ganigi*. Mota: *ganagana*. Retan, Lo, Mota, Maewo: *gangan*. Duke of York: *wangan*. Leon, Sasar: *gen*. Vuras: *gengen*. Ambrym: *ngene*. Nguna: *ngani*. Ambrym: *ngene*. Gog: *ngongot*. Buka: *nan*, *nanni*, *tuanan*, *iana* (restricted to cannibal eating). Duke of York, Roro, Uni, Pokau, Kabad, Motu, Hula, Tavara, Awalama, Taupota, Wedau: *ani*. Mekeo: *angi*. Keapara: *hani*. Sariba: *kai*. Suau, Mabuag: *ai*. Dobu: *e'ai*. Kabad: *ania*. New Britain: *an*, *ian*.

Malay: *makan*, to eat. Malagasy: *humana*, *hanina*, id. Togean: *mokonie*, id.Arabic: *'akala*, to eat; *'akil'*, messmate. Hebrew: *'akal*, to eat.

Although the alternative form *nganikani* points (see note 117) to a Polynesian stock, it is impossible to link *kani* with the Polynesian *kai* to eat. While the omission of a medial consonant sometimes takes place, and in the tabulation of the phonetic results we have a solitary example in *inum* (321) to drink Marina *o'omia*, yet if it were far more common it would

still remain impracticable in this instance for the distinct reason that we are quite unable to adduce a single word in which all Polynesia has dropped a medial consonant which all Melanesia has retained.

Viti shows that *a* or *i* may be the final vowel. The *i*-forms are found in Efaté, Viti, Marina, Sesake, Belaga, Nggela, Nguna, Duke of York, Buka, Kabadi; to which may be added an *e*-form in Ambrym. The *a*-forms occur in Viti, Nggela, Mota. Terminal abrasion is found in Gog, Merlav, Retan, Lo, Maewo, Duke of York, Nguna, Buka, Kabadi, New Britain, Leon, Sasar, Vuras.

The earlier vowel of the radical is found as *a* in Efaté, Viti, Marina, Sesake, Belaga, Gog, Merlav, Nggela, Mota, Retan, Lo, Maewo, Duke of York, Nguna, Buka, Kabadi, New Britain. An *e*-form occurs in Ambrym, where it is associated with final *e*, and in Leon, Sasar and Vuras. If indeed it be the same radical an *o*-form is seen in Gog.

The initial consonant *k* occurs in Efaté, Viti, Marina, Sesake. It passes from surd to sonant *g* in Sesake, Belaga, Gog, Merlav, Nggela, Mota, Retan, Lo, Maewo, Leon, Sasar, Duke of York, Vuras, Ambrym. It goes still higher in the palatal series to *ng* in Nguna, Ambrym and perhaps Gog. It is abraded in Duke of York, Kabadi and New Britain. The second consonant remains *n* without change in all these cases, save again the Gog anomaly and the Mekeo.

We therefore diagram this radical thus:

$$\left. \begin{array}{c} k \\ g \\ ng \end{array} \right\} \left. \begin{array}{c} a \\ e \end{array} \right\} n \left\{ \begin{array}{c} i \\ e \\ a \end{array} \right.$$

The anomalies are now to be considered. With a vowel not elsewhere found, with a change *n-ng* which the radical but once elsewhere exhibits, and with the assumption of a final *t* which elsewhere does not appear, Gog *ngongot* is not acceptable in this record. The only way by which it can be included is to assume it to be a composite form, *ngon-got*, and this parting of the palatal nasal would be wholly indefensible. The remaining anomalies, at the extreme north of the Samoa track, suggest an explanation by a developmental series. Frontal abrasion is sufficiently well established in the Melanesian handling of Polynesian loan words to admit Duke of York *ani* to the *kani* radical. This admission will naturally carry with it Kabadi *ania* (*a* the common verb isolating objective suffix), and by terminal abrasion New Britain *an*. This *an* may be taken to admit New Britain *ian*, and this in turn carries with it Buka *iana*. The other Buka forms involve a further leap. Reverting once more to Duke of York *ani*, if we can regard *nanni* as in some sort a reduplication (which it must be acknowledged is informal) that would carry *nan* with it and for *tuanan* we should have to postulate a composite of this *nan*. This is far too involved to be satisfactory.

Our Indonesian material is based on a radical *m-k-n* and the identification should be overruled. The Malagasy is at variance with Indonesian and Melanesian alike and should be rejected. It is impossible to see that the Semitic has anything to do with the case.

47.

tai na, brother's brother, sister's sister.

The Proto-Samoan radical is **tehi**, as shown by Niuē, Tonga and Uvea. Samoa: *tei*, younger brother or sister. Niuē: *tehina*, younger brother. Tonga: *tehina*, younger brother or sister. Uvea: *tehina*, brother, sister. Rarotonga, Paumotu, Mangareva, Tahiti, Maori: *teina*, younger brother or sister. Marquesas: *teina*, a younger brother. Sikayana: *teina*, brother. Futuna: *tāina*, brother's brother, sister's sister. Hawaii: *kaina*, the younger of two brothers or of two sisters.

Viti: *tathi*, a younger brother or sister.

Mota: *tasi-k*, brother. Malo, Laur, Lamassa, Lambell, Kiriwina, Dobu: *tasi*, id. Epi: *tahi*, id. Motu: *tadi*, younger brother or sister or cousin. Malekula: *tesi*, brother. King: *dirsi*, id. Bauro: *asi*, id. Santo: *tesi-na*, his younger brother. Pala: *tes*, *tāsi*, brother. Keapara, Hula, Galoma: *ari*, id. Waima: *hati*, id. Kabadi: *kadi*, id. Misima, Panaieti: *tari*, id. Sinaugoro: *tali*, id.

Malay: *adik*, brother. Bugi: *anri*, id. Malagasy: *zandri*, id.

Arabic: *rasī'*, brother.

The initial consonant is *t* in Polynesia (Hawaii *k*), and in Melanesia, with the single exception of Bauro *asi* where it is dropped; this is our only Bauro word, so that we are without information as to the frequency of the frontal abrasion of this mute, but it is not unknown in Melanesia. The change to *d* in King is normal.

The aspiration is found in Epi; it undergoes the normal transition to the sibilant in Mota, Malo, Laur, Lamassa, Lambell, Malekula, Bauro, Santo; its mutation to *th* in Viti is usual; the sound in King is not quite clearly identified, it was collected by the same German explorer who gathered Laur, Lambell and Lamassa; Efaté alone drops the aspiration; the Motu *d* is normal to that New Guinea settlement; and elsewhere in Melanesia, involving the surd instead of the sonant, is found in Alite, Saa and Wango.

The final vowel is constant.

Of the former vowel there are two main groups. Polynesia generally, and Malekula and Santo have *e*; Melanesia generally, and Viti, Futuna and Hawaii have *a*. King again stands in a class by itself with *i*.

In Santo the *na* is clearly possessive suffix, such also is the *k* in Mota.

The only common element in Indonesia is *a-i* parted by a consonant, which is not the aspiration or a normal mutation thereof; the initial consonant is absent. We can not accept this identification. The Malagasy may be associable with Bugi, certainly not with the Proto-Samoan.

EFATE-POLYNESIAN.

48.

alo, belly, abdomen, the front, before.

Samoa: *alo*, the under side (as of a cloth or the belly of a fish), a chief's belly, the seat of the affections. Tonga: *alo*, the abdomen of great personages. Futuna: *alo*, the entrails, in the

presence of, before. Maori: *aroaro*, the front, presence, face. Tahiti, Mangaia: *aro*, id. Hawaii: *alo*, id. Marquesas: *ao*, before, in front. Rarotonga: *aroaro*, the presence. Manga-reva: *aro*, the presence, before. Paumotu: *aronga*, the visage.

49.

bafano, fafano, to wash the hands.

Samoa: *fafano, fanofano*, to wash the hands and rinse the mouth.

Tonga, Futuna, Niuē, Uvea: *fanofano*, to wash the hands.

50.

bwefe, fefe, oven cover made of leaves.

Samoa: *veve*, leaves covered over an oven to keep in the heat.

Futuna: *veve*, name of a mat of leaves of coconut or other plant placed on the viands in an oven to keep them from being soiled by the earth which covers them.

51.

boboi, a mask, cover or disguise.

Tonga, Uvea: *fufu*, to hide, to secrete, to conceal. Futuna, Niuē: *fufū*, id.

52.

bukubukura, full of little swellings, pimples.

Samoa: *po'u*, pimple. Futuna: *poku*, id. Tonga: *bokubaku*, a scab.

53.

fet, a bird's nest.

Samoa: *fataninga*, a bird's nest. Niuē: *fata*, id. Uvea: *fatai*, id.

Tonga: *bununga*, a nest.

Nggela: *niku*, a nest. Bugotu: *gniku*, id. Mota: *nig*, to build a nest.

54.

ata, a man.

Samoa: *atali'i*, (*li'i*, small) son, lit. little man. Rapanui: *atariki*, oldest son. Nuguria: *atariki*, son-in-law.

55.

māfa, to be broken, cracked.

Samoa: *māfā*, ora vaginae aperta. Tonga: *mafaa*, to open, to extend; *majaafaa*, split, cracked, choppy. Futuna: *majaā*, broken, cracked. Niuē: *maja, mafāfā*, a crack, a rift. Hawaii:

maha, to make a rent or hole in. Nukuoro: *mahaa*, to break.

Uvea: *majaafaa*, to yawn, to gape.

56.

maia, a species of banana.

Samoa: *mamae*, one kind of banana. Tonga: *mamae*, the plantain.

57.

mākinikini, to be itchy.

Samoa: *ma'ini*, to tingle, to smart. Tonga, Futuna: *makini*, id.

Niuē: *maeneene*(?), to tingle.

The absence of the *k* in Niuē is anomalous and points to an association with Samoan *eneene* to tickle. Cf. 227.

58.

mānu, a multitude, a very great number, a thousand.

Samoa: *mano*, *manomānō*, 10,000, a myriad, a great number, innumerable, the limit of counting. Tonga, Nuguria: *mano*, 10,000. Maori, Rapanui, Tahiti: *mano*, 1,000. Hawaii: *mano*, 400,000, multitudinous. Mangaia: *mano*, 2,000, innumerable. Marquesas: *mano*, 4,000, any great number. Paumotu: *manomano*, innumerable. Nukuoro: *mano*, 100; *mano-tini*, a very large number.

59.

manubunubu, **nobwanobwa**, to be soft, sleek as the skin of a newborn pig or infant.

Hawaii: *nopunopu*, thoroughly cooked, soft, spongy, large, plump, fat, swelled out; *nopue*, plump, round, as a well fed fat hog.

Oiun: *nubanuba*, soft, as cooked food. Kiviri: *nunubas*, id. Motu: *manokamanoka*, id. Pokau: *manomano*, id. Kabadi: *manova*, id.

60.

mataisau, **matakseu**, a carpenter.

Samoa: *mataisau*, an honorific term for carpenter.

The derivation from *mata* as "the eye (or director or master) of cutting" does not seem so valid as that in which I have assigned it to the Samoan *matai*, one skilled as a master of craft, and *sau*, a particularized cutting as shown in *saupapa* to cut off the outer part of a log to make it level and smooth. The Viti *matai* means carpenter and then by extension a mechanic of any craft.

61.

mauta, **mautu**, rising ground.

Polynesia, all signifying mountain: Samoa, Futuna, Mangaia, Maori, Rarotonga, Manahiki, Bukabuka, Fakaafo: *maunga*. Paumotu: *mahunga*. Hawaii: *mauna*. Sikayana: *jakamauna*. Tahiti: *maua*. Mangareva: *manga*. Tonga, Uvea, Niuē, Rapanui: *mounga*. Nuguria: *mauna*, *mouna*.

The derivation suggested as from *mau* to remain firm does not particularly appeal to me, although *mau-nga* is in form a typical noun-making from an attributive in which the verb sense has so strongly developed as to call for such differentiation. I set contra the note that in the languages in which *maunga* has undergone vowel change (*mounga*, *manga*) the proposed radical *mau* as verb remains unaltered.

62.

mē, **namē**, **namai**, a rope, a string.

Samoa, Tonga, Futuna, Uvea: *maea*, a rope, cord, cable. Nuguria: *maia*, a band.

63.

mitariki, the Pleiades.

Polynesia names the Pleiades thus: Samoa: *matali'i*. Futuna, Tonga: *mataliki*. Fotuna, Nuguria, Maori, Mangaia, Mangareva: *matariki*. Tahiti: *matarii*. Hawaii: *makalii*. Marquesas: *mataiki*.

Micronesian names for the same constellation: Ponape: *makeriker*.
Lamotrek: *magarigar*. Yap: *magirigir*. Mortlocks: *marikir*.

EFATE-VITI-POLYNESIA.

64.

būle, a shell, lit. gleaming, shining, glittering; cf. *bila* 284.

Samoa: *pule*, a white cowry, general name for marine shells; *pulepule*, small shellfish; *pulei*, to be checkered, to be mixed alternately as different colored beads in a necklace; *pūlepule*, spotted, striped with various colors. Tonga: *bule*, a cowry; *bulebule*, a shellfish; *bulevaka*, the white cowry; *bulebule*, spotted. Futuna: *pule*, a univalve shell; *pulepule*, striped, spotted with various colors. Niuē: *pule*, the cowry; *pulepule*, striped, variegated. Uvea: *pulepule*, variegated. Hawaii: *pulepule*, varicolored, spotted, speckled. Tahiti, Rapanui: *purepure*, spotted, checkered. Mangareva: *akapurepure*, to color, to variegate. Paumotu: *hakapurepure*, to dye, to color. Maori: *opure*, pied, variegated. Rapanui, Nuguria: *pure*, a shell.

Viti: *mbuli*, the white cowry.

Mota: *pule*, a very dark cowry shell. Miriam: *ka*-(a shell)-*buli-buli*, a small univalve.

65.

fiso, an annual reed-like plant whose top is used for food.

Samoa: *fiso*, wild sugar cane. Proto-Samoan: *fiho*.

Viti: *vitho*, wild sugar cane.

Mota: *viso*, a reed with edible flower head. Motu: *hido*, id.

66.

ngongo, an aquatic bird, to wade.

Samoa: *ngongo*, the tern (*Sterna longipennis*). Tonga, Niuē: *ngongo*, the sea gull. Futuna: *ngōngō*, the name of a bird.

Viti: *ngongo*, a sea bird.

The proposed derivation through Samoan 'a'au to swim from Arabic *ḥamma* is not convincing.

67.

kie, the plant whose leaf is baked, dried and split into threads to be woven into mats.

Maori: *kiekie*, the name of a climbing plant (*Freycinetia banksii*), the leaves and fiber were formerly used in making fine mats. Tonga: *kie*, a mat; *kiekie*, a girdle. Futuna: *kie*, a mat; *kiekie*, a species of liana. Rarotonga: *kie*, the *Freycinetia banksii*. Marquesas: *kiekie*, moss resembling a fine beard. Tongarewa: *kie*, the pandanus leaf, the mat woven therefrom. Mangareva: *ngie*, small pandanus leaves used in mat-making. Samoa: 'ie, fine mats; 'ie'ie, a *Freycinetia* used in making fish traps. Tahiti: *ie*, a sail (of matting); *ieie*, fibrous roots used in basketry. Hawaii: *ie*, a vine used in basketry, material braided into mats.

Viti: *kiekie*, fine mats, pandanus whose leaves are used in mat making.

68.

langa-ti, langa i, langai, to raise, to lift up.

Samoa: *langa*, to raise, to rise. Tonga: *langa*, to raise up the soil; *fakalanga*, to raise up. Uvea, Futuna: *langa*, to raise. Niuē: *langa*, to rise against; *langaaki*, to raise up. Nukuoro: *langa*, to float. Hawaii: *lana*, id. Maori: *ranga*, to raise, to cast up. Mangareva: *ranga*, to float on the surface of water. Paumotu: *fakaranga*, to raise, to lift up. Tahiti: *toraaraa*, to raise up. Marquesas: *aka, ana*, to swim on the surface.

Viti: *langa*, to be lifted up, said of a brandished club.

Mota: *langa*, to lift up, to turn up.

69.

langilangi, to be proud, uplifted.

Samoa: *fa'alangilangi*, to be angry because of disrespect. Tonga: *langilangi*, powerful, great, applied to chiefs; *fakalangilangi*, to honor, to dignify, to treat with great respect. Hawaii: *lanilani*, to be proud, to show haughtiness. Uvea: *fakalai*, to compliment, to adulate.

Viti: *langilangi*, proud.

70.

lofa i, to bend.

Samoa: *lofa*, to cower down, to crouch as a dog. Tonga: *lofatia*, obedient, yielding, respectful. Proto-Samoan: **lofat**.

Viti: *lovetha*, to bend.

71.

mono-ti, munu-ti, to close, to plug, to stop, to block up; though given as a dialectic form of *bono-ti* it is probably of a different stem.

Samoa: *momono*, to cork, to plug; *monomono*, to calk. Tonga: *mono*, to squeeze, to press in: *monoji*, to cork; *monomonoji*, to patch, to mend. Futuna: *mono*, to calk, to bung, to plug. Uvea: *momonono*, to patch. Proto-Samoan: **monot**.

Viti: *mononotaka*, to stop up sennit or other holes in a canoe with breadfruit gum, to calk.

72.

sakau, a reef.

Samoa: *a'au*, a coral reef. Tonga: *hakau*, a sunken reef or rock. Maori: *akau*, the coast. Mangareva: *akau*, lowland, shoal, a ridge of rocks. Paumotu: *akau*, a reef of rocks. Mangaia: *akau*, a coral reef. Nuguria: *agau*, id. Proto-Samoan: **hakau**.

Viti: *thakau*, a reef.

EFATE-MELANESIAN-POLYNESIAN.

73.

ata na, spirit, soul, shadow, image.

Maori: *ata*, morning personified, a reflected image, shadow, spirit, soul. Samoa: *ata*, shadow, spirit, dawn, reflected image. Tonga: *ata*, a shadow, the dawn, to reflect. Niuē: *ata*, shadow,

reflected image. Futuna: *ata*, shadow, twilight. Fotuna: *ata*, ghost, shadow, image. Tahiti: *ata*, shadow, twilight. Marquesas: *ata*, shadow, likeness. Mangaia: *ata*, shadow, soul, dawn. Mangareva: *ata*, shadow, image, twilight. Nukuoro: *ata*, shadow. Fila: *ata*, the soul. Uvea: *aata*, shadow; *ata*, image. Moriori: *ateata*, dawn. Hawaii: *aka*, shadow, likeness, dawn. Nuguria: *te ata te mahina*, the waning moon. Rapanui: *ata*, image, picture, dawn, break of day, close of day; *ataata*, close of day.
Mota: *ata*, soul. Bierian: *ata mate*, ghost.

74.

ati na, nati, nutu, child.

Maori: *ati*, descendant, a prefix to tribal names as descendants of certain persons. Samoa: *ati*, a particle denoting a number of chiefs of the same name or title. Tahiti: *ati*, patronymic prefix grouping the name of an ancestor with the descendants. Mangareva: *ati*, descendant. Also, Maori: *ngati*, patronymic tribal prefix, descendants of. Mangaia: *ngati*, a tribe.
Omba: *nati*, native of. Makura: *nati*, son, people of. Bierian: *nati*, son. Makelula: *anati*, *netin*, child. Malo, Nguna: *natu*, son. Baravon: *natu*, son. Lambell: *natu*, child. Wagawaga: *natu*, son, child of a woman's sister. Tubetube: *natu*, child, grandchild, child of a woman's sister, child of brother of man or woman. Motu: *natu*, son, daughter, brother's son. Sinaugoro, Suau, Sariba, Panaieti, Dobu, Tavara, Awalama, Taupota, Wedau, Galavi, Boniki, Mukawa, Kubiri, Raqa, Kiviri, Oiun: *natu*, child. Kabadi, Pokau, Doura: *naku*, offspring, child. Roro, Hula: *nahu*, child. Kiriwina: *latu*, id. Keapara, Galoma: *nau*, id. Mekeo: *ngaunga*, id. King: *nutu*, child. Lamassa: *nutú*, child. Matupit: *tu*, son. Duke of York, Pala, Moánus: *nat*, child. Lamassa: *fanát*, child.

The existence of the *ati-nati* in Efaté and Maori *ati-ngati* shows that the common Polynesian forms are the result of frontal abrasion. The presumably older complete form holds throughout Melanesia, except as noted below, and the *n* undergoes no change. So, too, the second consonant remains unaltered except that in Kabadi *t-k* shows a far western instance of a change which is resistless in parts of Polynesia to-day. The former vowel remains without alteration throughout Melanesia except for the *u*-form of King and Lamassa on the New Ireland coast, yet the presence of the *a* in Duke of York within eyeshot shows this a merely local variant. The principal variation involves the final vowel. Polynesia and the central New Hebrides (Efaté, Omba, Makura and Malekula) have *i*. Nguna in the same tract of the New Hebrides has *u*, thence we encounter no record of the word until we find the *u*-form in the extreme north in Torres Straits, Baravon, Lambell, King and Lamassa. Duke of York and Moánus *nat* may be an abrasion of *nati* or *natu*, but from the fact that they lie in the *natu* region the latter is probably their source. Matupit *tu* and Lamassa *fanát* are included more on account of general suggestion of resemblance than from established identification.

75.

matulu, matultul, matoltol, to be swollen, thick.

Samoa: *mätolulotu*, *matoutou*, thick (restricted to pork). Nukuoro: *matolulotu*, thick. Tonga, Futuna, Niuē: *matolu*, thick. Uvea: *matolu*, thickness. Maori: *matotoru*, id. Fotuna, Tahiti: *matoru*, thick, full-fleshed. Mangareva: *matoru*, fat, thick, heavy. Rapanui: *matorutoru*, thick, not compact. Hawaii: *makolu*, wide, thick, deep. Marquesas: *motou*, thickness. Epi: *toru*, large. Norbarbar: *motoltol*, thick. Mota: *matoltol*, id. Nguna: *matulu*, id. Malekula: *metetir*, id. Baki: *mererolu*, id.

This root is discussed under 163.

76.

um, ubu, oven.

Samoa, Maori, Nukuoro, Niuē, Tahiti, Hawaii, Mangaia, Marquesas, Mangareva, Paumotu: *umu*, oven. Tonga: *ngotoumu*, id. Uvea: *ngutuūmu*, id. Futuna: *ūmu-kai*, id. Fotuna: *amu*, cooking place. Rapanui: *umu*, oven; *humu hare*, cook house. Motu: *amu*, oven. Mabuiag: *amai*, id. Miriam: *ame*, id. New Britain: *ubu*, id. Mota: *um*, id. Ponape: *um*, id. Bierian: *baumu*, id. Tanna: *noanumun*, oven stones. Aneityum: *inmunum*, oven (*inmun*, an opening); *nehpanum*, a large fire for cooking.

The Polynesian radical is consistently *umu*. Tonga and Uvea compound with it a word which in Uvea is distinctly *ngutu* mouth and in Tongan we may feel that *ngutu* has been specifically differentiated in this composite. In the Futuna composite the latter element is merely *kai* food.

The principle of terminal abrasion is sufficient to identify with this the Efaté and Mota *um*, and even the remote and extralimital Ponape *um*. It is no difficult task to find the identification in Motu and Fotuna, for the *u-a* mutation is general. The fact that Efaté has *ubu* as well as *um* serves to link in the New Britain *ubu*. We lack data on which to discuss an *m-b* mutation; the nearest approximation lies in a single *m-v* instance in *masaki* (323) ill Nggela *vahagi*. Codrington (Mota dictionary) cites the New Britain word as *umbu*. This would correspond to the system in Viti where a *b* requires the preface of an *m*. It might be that a people who required thus to preface a *b* would by attraction add a *b* to an *m* in loan material. Then when it passed along in secondary borrowing to others who could manage an unprefaced *b* the proper *m* would be relinquished in favor of the intrusive *b*. This is purely speculative, yet we may cite at least one instance in which a similar principle has been active in the borrowing. We have this on Dr. Codrington's excellent authority (Melanesian Languages 92):

The formation of the Fagani *figu* (star) deserves notice. In that place the *h* of Wango, three miles off, regularly turns to *f*, but *g* represents the same letter left out, perceptibly, with a gap in the sound, in Wango. The Fagani (Ha'ani at Wango) word *figu* ought, then, to represent the Wango *hi'u*, and in fact it represents *he'u*. But it is very instructive to observe that the gap in the Wango word really means *t*, not *g*, and has been filled up with *g* in the Fagani word under a misapprehension. It is plain that the Fagani and Wango words are independent, because one comes from *vitu*, one from *vetu*. The interest lies in the filling up the gap with *g* in Fagani, because the gap in Wango generally represents *g*, though sometimes it is in place of *t*.

77.

ūsū, iu, u, a reed.Samoa: *u*, a reed.Malekula: *ui*, a reed. Epi: *yi*, id.

The community of *u* in Samoa and Efaté together with the presence of the longer form *usu* in the latter argues in favor of *usu* as the earlier radical, which has been preserved in Efaté. We are not without examples in these comparisons of the possibility of a double terminal abrasion, first the abrasion of a final vowel, then the abrasion of the consonant thereby exposed, thus presenting a new vowel final. This seems rather to have been the method than the bodily dropping of a final syllable. This note will be found extended in 98.

Malekula and Epi are by no means satisfactorily identified. They seem much more distinctly to be variants of some radical of which *i* is the constant component.

EFATE-POLYNESIAN-MALAY.

78.

ne, here, there, this, that.

Samoa: *nei*, this, here. Mangareva, Aniwa, Sikayana, Futuna, Uvea, Nuguria, Niuē: *nei*, this. Maori: *nei*, denoting near position. Tahiti: *nei*, here, now, this. Hawaii: *nei*, this (of place, time, person). Marquesas: *nei*, here, now. Paumotu: *nei*, here. Nukuoro: *nei*, now. Rarotonga: *ainei*, this. Tonga: *ni*, this.

Macassar: *inni*, this.

79.

tumatuma i, to knock, as at a door as a sign to open it.Samoa: *tuma*, to strike with the knuckles.Malay: *antam*, to knock.

EFATE-POLYNESIAN-SEMITIC.

80.

āliāli, taliali, to delay, be slow.

Hawaii: *alia*, to wait, to stop one when doing a thing, to restrain, used imperatively, stop! wait! take care! stand aside! Tahiti: *aria*, stop! hold! Mangareva: *karia*, an interjection used to show off a thing in the sense "there! do you see!" Samoa: *tali*, to wait for; *fa'atali*, id. Futuna, Uvea: *tali*, *tatali*, to wait for, to expect. Maori: *tatari*, to wait, to tarry. Tahiti: *tatari*, to wait, to delay. Rapanui: *tatari*, to wait for. Nukuoro: *hakatari*, to wait. Hawaii: *kali*, to wait, to tarry, to stay. Tonga: *tali*, to wait for. Rarotonga: *tatari*, to wait. Marquesas: *tetai*, to wait for, to stay for.

Arabic: *āla* (*alu*), *alla'*, to delay, be slow.

Particular interest attaches to the synonymy in Efaté of two forms, each of which is found in Polynesia though never again are they brought

together in the same speech. The existence in Polynesia of a third form in *k* (Mangareva *karia*, but not Hawaii *kali*) seems to point out this as an instance in which shades of meaning are communicable by the system of consonantal modulants which I have elsewhere argued at length (27 American Journal of Philology, 392).

81.

amos i, amo, amo-taki, amo-rua, tak'amo, amoamo, to carry, to bear, to carry on the shoulder.

Samoa, Maori, Hawaii, Marquesas, Mangaia: *amo*, to carry on the shoulder. Futuna: *âmo*, to carry a burden. Uvea: *amonga*, a burden, carrying pole. Tahiti: *amo*, to carry on the back. Moriori, Nuguria: *amo*, to carry on a pole. Aniwa: *amo*, to take. Rapanui: *amo*, to carry; *amo mai*, to bring; *amo*, a yoke; *amonga*, a burden. Tonga: *haamo*, to carry on the shoulder. Niuê: *hahamo*, to carry a burden on a pole.

Hebrew: *'amas*, to bear, to carry, especially to lift up a burden and put it on a beast.

That the Proto-Samoan radical is **hamos** is established as to the initial aspiration by Tonga and Niuê, as to the final consonant by Efaté.

82.

bakateba, to watch, to look out for.

Samoa: *tepa*, to look upward. Futuna: *tepa*, to turn the head or eyes in order to look.

Hebrew: *šapah*, to look out for, to view, to watch.

83.

beingo, baingo, a shell trumpet, a kind of flute (coconut shell).

Samoa, Futuna, Uvea: *fangufangu*, a flute. Tonga: *fangufangu*, a flute, to blow through the nose. Uvea: *fangu*, to blow the nose. Niuê: *fangu e ihu*, id. Hawaii: *hanu*, to emit breath from the lungs; *hanuhanu*, to smell, as a dog following the track of his master.

Arabic: *baḳa*, to blow a trumpet; *ba'ku*, *ba'ko*, a trumpet.

The sense of the Polynesian will be made satisfactorily clear by the note that the flute is played at the nostrils. If the coconut shell is really used in Efaté as a musical instrument it has escaped my observation and all record, so far as I have seen, and at any rate it would properly be classed rather with the ocarina than with the flute.

84.

bua, to divide.

Samoa: *vaevae*, to divide.

Arabic: *fa'a*, *fa'w'*, *fa'y'*, to split, cleave, to be open, separated.

If there be any validity at all in this identification it must be with the element *va* as meaning to have or to be a space between. It will call for *bu-v* mutation. The only light which our material sheds upon such a mutation lies in the similar *pu-v* in *vivini* (242) to crow Malekula *puinpuin* to whistle. On the radical sense of *va* see 27 American Journal of Philology, 387.

85.

bubu, to gargle.

Samoa: *pūpū*, to gargle, to rinse out the mouth. Tonga: *bubu*, to gargle.

Arabic: *ba'ba'*, *ba'ba'u*, gurgling sound of water flowing from a bottle.

86.

bulifulia, mabulu, mafulu, swollen here and there, fat.

Samoa: *fula*, dropsy of the belly, stout; *fulafula*, swellings on the body; *fufula*, to swell; *fulafula*, *fulanga'i*, to beswollen. Tonga: *fula*, a tumor, a hard swelling; *fufula*, to swell; *bubula*, a swelling, protuberance, to swell, to bloat. Futuna: *fula*, *fufula*, *fulafula*, *pula*, to swell. Niuē: *fufula*, to swell. Uvea: *fufula*, *mapula*, id. Hawaii: *hula*, a swelling, a protuberance under the arm or on the thigh. Fotuna: *no-fura*, to swell; *niko-fura*, swollen.

Hebrew: *'afal*, to swell up, to be tumid. Arabic: *'afila*, to have a tumor or hernia.

The Proto-Samoan radical being **fulang** we should look for the final consonant in Efaté. Since it is not found, since even the vowel is different, we are not to accept this identification as altogether satisfactory. The labial uncertainty, however, is perhaps critical. The hesitation as to the employment of the spirant or the mute is carried along into Nuclear Polynesia; Tonga uses surd spirant and sonant mute; Futuna and Uvea use surd spirant and surd (their only) mute.

The Semitic is still farther away from the mark.

87.

huri, biri, to pierce, to stick.

Samoa: *velo*, to cast a spear or dart, to spear. Tonga: *velo*, to dart. Futuna: *velo*, *velosi*, to lance. Uvea: *velo*, to cast; impulse, incitement. Niuē: *velo*, to throw a spear or dart. Maori: *vero*, to stab, to pierce, to spear. Tahiti: *vero*, to dart or throw a spear. Mangaia: *vero*, to pierce, to lance. Mangaieva: *vero*, to lance, to throw a spear. Marquesas: *veo*, to lance, to throw a spear.

Ethiopic: *barara*, to stick, to stab.

The Proto-Samoan radical being **velos** brings this under the same comment as in the last preceding item.

88.

elo, èl', lolo, sweet, pleasant, agreeable.

Hawaii: *olu*, to be pleasant, agreeable.

Arabic: *halā'*, *halw'*, to be pleasant, agreeable.

Without more data we may neither wholly affirm nor quite deny this identification as between Melanesian and Polynesian. The sole point of Semitic resemblance lies in the possession of *l*.

89.

emai, emwai, in the distance, far away,

Samoa, Nukuoro: *mao*, distant, far. Samoa, Uvea, Fakaafo, Vaté, Maori, Hawaii, Mangaia, Manahiki, Rarotonga, Paumotu, Nuguria: *mamao*, distant, far away. Tonga: *mamaō*, id. Futuna: *mamaō*, id. Niue: *māmao*, id. Tahiti: *taumamao*, to hang out of reach. Mangareva: *akamamao*, to send away. Marquesas: *memao*, distant, far away.

Arabic: *ma'oka*, to be far off, distant; *ma'k'*, distance.

The Polynesian *mamao* can scarcely be brought into association with Efaté *emai*, as our author suggests without any consideration of the difficulties. To me *emai* seems far more likely to be the widespread *mai*, from, with a verb-making prefix. In neither case can the Semitic be said to have anything to do with the matter.

90.

fām i, bām i, to eat.

Samoa: *samusamu*, to eat the remains of food; *samuti*, to eat (jocular). Tonga: *hamu*, to eat food of one kind only. Futuna: *samuko*, id. Maori: *hamuhamu*, to eat scraps. Tahiti: *amu*, to eat; *aamu*, a glutton; *hamu*, gluttonous; *aīhamu*, to eat gluttonously the leavings of others. Hawaii: *hamu*, to eat fragments of food. Mangareva: *amu*, to eat with the mouth, not using the hands; to eat scraps or leavings.

Hebrew: *pa'am*, to have the mouth full, to swallow down. Arabic: *fa'ama*, id.

The Proto-Samoan radical is **samut**.

Against the identification lie two objections. In my note 77 I have shown how the abrasion of a final syllable may be accounted for as the abrasion of a vowel to a new terminal in a consonant followed by a second abrasion of the consonant to a new terminal in a vowel. Such operation is sufficiently rare in our material; far rarer would be such a case as this, the abrasion first of consonant, then of vowel, to end upon a closed syllable once more. The mutation *s-f*, *s-b*, must be rare indeed, for these materials show not a single instance of at all a satisfactory nature, not a single instance in which an *s* migrates to any point in the labial column.

The Semitic identification is as remote from Efaté as it is from Polynesian.

91.

fasu, fasua na, a part, portion, member of the body.

Samoa: *fāsi*, to split, a bit, a piece. Fotuna: *no-fafasia*, to split. Tonga: *faahi*, a side, a half of anything divided. Futuna: *faasi*, a side, a portion. Niue: *fāhi*, a side, a place. Uvea: *faahi*, a side, a part, to divide. Nuguria: *te vahi mahina*, the crescent moon.

Viti: *vathi*, to cut (chiefly of yams); pieces of yam for planting.

Hebrew: *baša'*, cut in pieces. Arabic: *baš'a'a*, to cut, to cleave; *baš'at*, a part, a piece.

The vowel change *i-u* is not so rare as to vitiate this identification (see 17 Journal of the Polynesian Society, 85).

92.

fonga, afo, nāfo, whetstone, grinding stone, and (because used as a whetstone) pumice.

Tonga, Futuna, Uvea, Niuē: *fuanga*, a grindstone. Tonga: *fuofuanga*, pumice. Samoa: *foanga*, grindstone. Maori: *hoanga*, grindstone, whetstone. Mangareva: *hoanga, oanga*, a fine volcanic stone used for whetstones, a grindstone. Hawaii: *hoana*, a hone, whetstone, grindstone. Tahiti: *hoaa*, a whetstone. Arabic: *nasfa-t*, whetstone, pumice.

The stem is *fo* and *fu*. This surely can have nothing to do with the Semitic identification proposed. There is reason for doubt as to the definition. It will be understood that whetstone must be a very modern sense of the word in the Pacific, for until the Europeans brought iron the islanders had nothing to whet, since the process of putting an edge on stone implements is a tedious process of grinding. How far pumice is susceptible of such employment in whetting iron I am unable to say, but in the grinding of stone it can have little value. If it were not for the fact that the pumice sense is recorded from Tonga I should incline to regard the explanation given in the Efaté case as a labored effort to produce harmony with the Arabic.

93.

ngāfa, a fathom.

Samoa, Tonga, Nukuoro: *ngafa*, a fathom. Niuē: *ofa*, id. (Lamotrek: *ngaf*, id.)

Arabic: *kāmat*, a fathom.

The exact agreement of Efaté and Nuclear Polynesia suggests no connection with the proposed Arabic source other than that of identity of meaning.

94.

ngaingai, to pant, to be out of breath.

Samoa: *nga* (Tutuila dialect), *nga'e*, to breathe hard, to pant, to be out of breath. Tonga: *nga*, to pant; *ngaaki*, to cough. Futuna: *ngaaki*, to pant, to be out of breath. Mangareva: *nga*, to be hoarse. Maori: *nga*, to breathe; *tunganga*, to be out of breath. Hawaii: *na*, to gasp, to half-breathe; *nae*, to pant. Marquesas: *nae*, obstructed respiration. Rapanui: *ngaengae*, shortness of breath, out of breath.

Syriac: *kah*, to pant.

The Proto-Samoan radical is **ngak**. The Efaté is explicable as formed from the already abraded stem by the verb-forming suffix.

95.

ngoko i, ngokoi, ngokei, ngokai, to scrape, to mark, to paint, to smear (all used in reference to *nafona* or bast cloth); **koko**, reddish juice or paint for bast cloth made from a plant of the same name.

Samoa: *'o'ai*, to mark or paint bast cloth; *'o'a*, the tree (*Bischoffia javanica*) from which is obtained the coloring matter for this use. Tonga: *koka*, the name of the tree ut sup.; to paint cloth. Futuna: *koka*, id. Niuē: *koka*, name of a tree whose wood is used for rafters.

Hebrew: *ḥaḳah*, *ḥaḳak*, to cut into, to *hack*, to engrave, to carve, to draw, to paint, to delineate.

The identification involves none but frequent mutations as between Efaté and Nuclear Polynesia. The verb may be derived from the tree name; the tree may have been named from the purpose to which it is put. Of the two equal possibilities I incline to the former, for the use of the *i* in forming the Samoan verb tends to make it transitive and specific, literally to put-*koka*-on. If this be so the sense is one of painting or daubing. Therefore in Efaté, where our author specifies that it is used only of bast cloth as in Samoa, the sense "to scrape" can only be descriptive of the motion of painting and without signification of removing aught. He has evidently relied upon that sense to clinch his identification of meaning with the Hebrew word proposed as ancestral. The general quality of his Semitic parallels is quaintly illustrated in this Hebrew word. He has given, in which I have duly followed him, the emphasis of italics to the definition *hack*, evidently struck with the resemblance *ḥaḳah*-*hack*, and not unwilling to let the implication stand that our *hack* is Yiddish. Our Germanic forebears had the word long before they acquired the raw material of the *Judenhetze*.

96.

kaf, to be bent.

Maori: *kohu*, somewhat bent, concave, warped.

Hebrew: *kafaf*, to be bent.

Cf. *kabwe* 179.

97.

kāri, **takāri**, to hasten, to go swiftly.

Maori: *kari*, *keri*, to rush along violently, as wind.

Arabic: *kāra*, to hasten.

98.

kon, **kona**, **kokon**, **ngkon**, to be bitter.

Samoa: *'ona*, *'o'ona*, bitter, sour, acid, poisonous; *'onasia*, to be drunk, poisoned. Tonga: *kona*, *konahia*, bitter, drunk, poisoned.

Futuna: *kona*, bitter, poison. Niuē: *kona*, *konahia*, bitter,

acid, nauseous, drunk, poisoned. Nuguria: *kona*, sour. Uvea:

kona, bitter, poisoned, drunk; *konahia*, drunkenness. Fotuna:

kona, drunk. Hawaii: *ona*, drunk. Tahiti: *onaona*, sharp,

disagreeable.

Mota: *gogona*, bitter. Santo: *kogona*, id. Eromanga: *nakan*, id.

Arabic: *ḥoma-t*, bitter, heat, gall, poison. Ethiopic: *ḥama-t*, id.

Hebrew: *ḥamah*, id.

The Proto-Samoan radical is **konas**.

The Efaté forms show us still more clearly than in 77 the graduation of the process by which a final syllable is lost, not as syllable but by successive abrasion of its members. In *kona* we have the transition form after the abrasion of the final *s*. In *kon*, *kokon*, *ngkon* we find the ultimate result upon the abrasion of the then final vowel. Thus it is made clear that the syllable does not drop off as a unit.

The proposed Semitic identifications accord with this only in one or in two vowels, the consonant structure being wholly unlike.

99.

leba, a species of earth, clay, mud, dirt.

Maori: *repo*, dirt. Tahiti: *repo*, earth, dirt, mold, dust, filth. Manga-
 reva: *repo*, dirt, ordure. Paumotu: *repo*, dirt, mire. Hawaii:
lepo, general name for dirt, dust, defilement of any sort, clay.
 soil, earth, dung. Marquesas: *epo*, dust, dirt, mire, mud, earth,
 Arabic: *ṭabi'a*, dirty; *ṭabe'*, *ṭaba'*, dirt, mud; *ṭub'an*, clay.

100.

lifāru, libuis, rāfālu, rīfālu, a part, some.

Niuē: *falu*, some, a little. Fotuna: *efaru*, some, many. Tahiti:
fanu, some. Nukuoro: *hanu*, a little.
 Arabic: *ba's'u*, a part, some.

101.

mak, to fall, become mild, gentle, die away, as the wind; **mao, maomao**, to be gentle, mild.

Samoa: *mao*, lull in the wind or the waves, the lull in a reef opening.
 Tonga: *maomao*, dry, applied to the intervals between showers.
 Niuē: *mao*, fine after rain, to cease raining. Futuna, Maori,
 Tahiti: *mao*, to cease raining. Hawaii: *mao*, to pass away,
 as fog or cloud. Marquesas: *mao*, dry, as land once wet.
 Syriac: *mak*, to be cast down, prostrated, humble, mild. Arabic:
mahiha, to be mild.

The difficulty here is that *mak*, which has to do with the wind, does not identify itself with the Polynesian *mao*; and that *mao*, which accords in form with the Polynesian, lacks accord in sense. Because we must rest upon the Polynesian base of form and signification we cannot accept this identification with Efaté and therefore must decline the Semitic which our author identifies with his Efaté material.

102.

malei, to divorce.

Samoa: *alei*, to divorce.
 Aneityum: *arei*, to drive away.
 Arabic: *ḥala'a*, to divorce.

If Melanesia or Polynesia afforded more identifications we could pass more confidently on this. If *malei* be an older form of the word we then have to do with a case of frontal abrasion, not wholly unknown yet rare, as will be seen in the tables in the Melanesian chapter.

But the Semitic accords with neither.

103.

malōi, buloi, a mask, cover of the face.

Samoa: *pulou*, a head covering, bonnet, turban. Tonga: *bulou*, a veil or cover to conceal the face; *buloa*, a mask. Futuna: *puloū*, to veil, to cover the head. Uvea: *fakapulou*, to veil. Hawaii: *pulou*, to cover the head, to blindfold. Tahiti: *purou*, to cover the head. Mangareva: *puroku*, to cover the head, as with a hat. Rapanui: *può*, to put on a hat. Nuguria: *buloo*, a hat.

Viti: *vulou, pulou*, to cover oneself up face and all.

Arabic: *barḳa'a*, to cover the face, to veil; *burḳa'o*, *burḳ'ū*, a veil.

104.

malōilōi, to be feeble, tottering from weakness.

Hawaii: *loeloe, maloeloe*, feeble, faint, weary.

Arabic: *la'la'a*, to be infirm and weak from disease and languor.

105.

masirsir, to sob, as after crying.

Samoa: *māsūsū*, to sob.

Arabic: *zaḥara*, to pant or gasp with vehemence and groaning.

The equivalence herein involved, *sir-su*, is extraordinary; and Dr. Macdonald's grammar of Efaté is so completely devoted to the statement of his Semitic theory that we encounter no suggestion as to the pronunciation of *sir*. It may be that he intends it to be pronounced as the syllable would be if English. In that case the vowel change is reasonable and the identification excellent.

The Semitic, however, seems not to fit.

106.

(a) **mau**, true; **loamau**, truth, true.

Tahiti: *mau*, true. Mangareva: *mau*, id. Rapanui: *mau*, certain.

(b) **mau**, firm, intrepid, brave.

Samoa: *mau*, to be firm, decided, unwavering. Tonga: *mau*, fast, firm, constant, unwavering. Maori: *mau*, fixed, steadfast.

Nuguria: *tamau*, to bind.

(c) **mau**, to come upon, to obtain, to find.

Samoa: *maua*, to get, obtain, have, take. Maori: *mau*, to take up, lay hold of, seize. Tahiti: *mau*, to hold, to seize. Tonga: *mau*, to obtain, possess. Mangareva: *mau*, to hold, to seize. Tongarewa: *mau*, to possess. Uvea: *mau*, to seize, to grasp, to hold, to contain. Rapanui: *mau*, to hold, to accept, to acquire; *maua*, to find; *maoa*, to hold.

(d) **mau**, very, indeed, continually.

Maori: *mau*, continuing, lasting. Samoa: *mau*-, very. Hawaii: *mau*, constantly, continually. Tonga: *mau*, always, perpetually.

Bierian: *lehmau*, truth, true.

Hebrew: *'aman*, to prop; *'amen*, firm, unshaken, faithful. Arabic: *'amana*, to confide in; *'amuna*, to be faithful; *'amina*, to trust, to be secure. Syriac: *'eman*, to persevere, to be constant; *'amen*, verily, truly, certainly.

The Efaté-Polynesian identifications are satisfactory in all four groups. The Semitic is not satisfactory in form at all.

107.

mwota, motamwota, refuse, rubbish, as fallen leaves.

Samoa: *otaota*, rubbish, filth, ordure. Tonga: *otoota*, sweepings, rubbish. Futuna: *otaota*, impurities in a badly strained fluid.

Niue: *otaota*, rubbish, refuse. Uvea: *otaota*, excrement, dung, filth, dirt. Maori: *ota*, sawdust; *otaota*, weeds, litter. Tahiti:

ota, chaff, refuse. Paumotu: *ota*, residue. Rapanui:
hakaotaota, to crumble. Hawaii: *oka*, refuse; *okaoka*, dust.
 Arabic: "*ota*", rubbish, refuse.

Again we encounter what seems to be a frontal abrasion, and it involves the same consonant as in 102. More evidence on the Melanesian side is needed before the identification will be quite satisfactory. But if the *m* is indeed radical it removes the resemblance on which the Semitic identification is based.

108.

nai, side board of a canoe, defender of a place, fence.

Samoa: *a*, *āi*, a fence, railing. Tonga: *a*, fence, hedge; *ai*, to surround, inclose, defend. Futuna: *a*, wall, hedge, fence, anything which makes an inclosure. Uvea: *ā*, wall, fence.
 Tahiti: *nanai*, to put in a hedge.

Arabic: *nawa'*, *naa'*, to guard, to protect.

This involves a frontal abrasion, namely of *n*; but the recurrence of the *n* in Tahiti *nanai* is very good evidence in favor of the identification.

109.

nobwa, **ob**, **naob**, lime (ashes of coral); **nobwanobwa**, to be dusty, to become dust, to fly in the air (dust).

Samoa: *navu*, lime.

Pokau: *avu*, lime. Mekeo: *apu*, id. Motu: *ahu*, id. Hula: *abu*, id.

Galoma: *gabu*, id. Sinaugoro: *gau*, id. Rubi: *gou*, id.

Sariba: *gauarana*, id. Nada: *pwau*, id. Kiriwina: *pwak*, id.

Wedau: *gabubua*, id. Panaieti, Misima: *aru*, id.

Arabic: cf. 110.

The Samoan may be homogenetic with *nobwa*, but it is impossible to associate it with *ob* and *naob*, unless the decrepit forms from Torres Straits are susceptible of interpretation as transition stages. That *nobwa* is not itself a modification of *ob* with the article is clear from the fact that *nobwa* takes the article and then becomes *nanobwa*.

110.

noba-ni, **tuma-ni**, **tumu na**, **tomo na**, **manubunubu**, to wrap in leaves with hot stones and cook; **nobwanobwa**, to be cooked, soft.

Hawaii: *nopu*, thoroughly cooked, soft, plump, fat, swelled out; *nopunopu*, to spring or swell up (in the mind), to swell, to be large, round, to spring up.

Arabic: *tabaḥa*, *tabḥ'*, to cook, roast, ripen, to grow up, to be cooked; *tubbah'*, *tābih'*, fatness; *ṭābih'*, cooked.

In the fact that there may be a satisfactory sense identification of the Hawaiian with *nobwanobwa* I see no warrant to extend the identification to the inclusion of *nobani* and *manubunubu* where the difference in signification seems prohibitive. Granted that this complete identification be valid it can serve in no way to admit *tumani* and the other forms in *t*; yet it is upon the *t* in these forms that our author hangs his Semitic identifications. They bear no relation to the Polynesian.

III.

nu ē a, nunu ēa, to wipe, to rub; **nūnu**, a wiper, a rubber.

Samoa: *nunu*, to grate down, as turmeric; *nuanga*, the grating of arrowroot and turmeric. Futuna: *nu, nunu*, to grate arrowroot. Niuē: *nu-pia*, id.

Arabic: *t'amma*, to sweep, to rub, to wipe off.

II2.

ofiofi, ōfi, āfi, to be near to, alongside of.

Tonga: *ofi*, near at hand, nearness. Futuna: *ofi, ofiofi*, near, close to. Uvea: *ovi*, id.

Arabic: *wahafa, wahf'*, to draw near to, to approach.

II3.

rakei, raki, to adorn, to dress.

Samoa: *la'ei*, dracæna leaves tied to a stone to attract cuttlefish, to fish with that device, to wear a train, to dress for a review of troops; *la'ei'au*, to exercise troops at a review, to have all ready for war. Tonga: *lakei*, leaves made fast to the stone used in catching the catfish as an ornament, to fish therewith. Futuna: *lakei*, used only of a garment, to have a long train. Nuguria: *lagei*, to paint the body with turmeric. Mangareva: *rakei*, to ornament, to adorn, a garland, chaplet, decoration. Rapanui: *rakei*, an ornament, to adorn, to embellish.

Ethiopic: *lahaya*, to adorn, to dress.

II4.

raku sa, raraku sa, taraku sa, taku-ti, to bind up, to remove one's things as in a flitting, to remove, to carry away.

Samoa: *la'u*, to clear off, to carry away; *la'u mai*, to bring. Uvea: *laku*, to send, to throw into. Hawaii: *laulau*, a bundle, bag; a wrapper of a bundle, the netting in which food is carried; *latau*, to seize, to catch hold of.

Arabic: *raka*, to dig, to bind up.

II5.

ras i, tas i, to shave the head, to strip off fruit from a tree.

Samoa: *lase*, to scrape off warts.

Mota: *ras, rasa*, to scrape, to scratch, to rub. Malo: *rosi*, to scrape.

Ethiopic: *las'aya*, to shave.

II6.

ruru, a cluster; **rei**, a band of men, a clump of trees.

Maori: *ruru*, to tie together. Tonga: *lulu*, the reeding of a house.

Tahiti: *ruru*, to congregate. Mangareva: *rurue*, to bring together a crowd; *ruruku*, to head up leaves. Paumotu: *ruru*,

a coop, a cage; *ruruhanga*, an assembly, to collect an assembly.

Arabic: *rā'a*, to grow, luxuriate, be congregated; *rī'at*, a band, a crowd.

117.

siuer (**siwer**), **suara**, **suuara**, **surata**, to walk, proceed, go away; **sisiuer**, **susuara**, to walk about.

Samoa: *savali*, *savavali*, to walk.

Arabic: *safara*, *sifār'*, to make a journey, to go away.

The identification is not wholly satisfactory nor yet to be set aside, for we have no such chain of data as would enable us to make a sure determination. The *v-u(w)* mutation is sufficiently frequent to call for no remark; thus *siuer* and *suuara* are accounted for and *suara* is but a slight and single step removed. But *surata* is not by any means in the same line and is impossible of association. In the reduplicated forms lies the strongest argument against identity; it will be observed that while Samoa duplicates the latter member, *savavali*, Efaté duplicates the former, *sisiuer*. In the discussion of a single item in the great topic of duplication (Duplication by Dissimilation, 30 American Journal of Philology, 173) I have presented the argument in proof of the determination of the relative importance of the two parts of a composite word as revealed in the duplication. It is here seen that in Samoa the latter element, bearing the duplication, is of the more importance. We can scarcely believe it possible that this assignment of importance is but a modern development in Polynesia; it surely must have been even better recognized in the earlier phase when they were migrant through Melanesia. If *siuer* be a Polynesian loan word, and I have already remarked (l. c. 180) upon the fact that wherever the words which undergo duplication in Efaté are susceptible of identification they are uniformly of Polynesian stock, it seems strange that in adopting the Polynesian mechanism of duplication these Melanesians should have misapplied it. Of the twenty-five identifiable duplications in that paper thirteen correspond exactly with the Samoan duplicated forms; eleven are not comparable because of the absence of duplication in these words in Samoan; one only is at variance with the Samoan duplication, and in this case the Samoan has two words of the same sound but of different sense, only one of which is duplicated, and the duplicated Efaté form corresponds with the form of the duplicated Samoan, but with the sense of the unduplicated, and it would seem that the Samoan had but specialized to avoid the chance of error. We may, then, accept the general principle that Efaté duplicates the same elements as Samoan. This determination, and I must regard it as based on good grounds, militates against this identification.

The Semitic identification proposed is altogether too good in form when we regard the length of their separation from the putative common stock. The Samoan has but the single sense of walking, the act of such locomotion with no slightest suggestion of either terminus. The sense of the Arabic bears no relation to the Samoan. It is only in Efaté that the two significations are brought together so that a transition might be possible. If the two words are formally identifiable Efaté has the walking sense. Unfortunately our author's propensity to make out his case at any cost is now so well comprehended that little dependence can be placed in his ingeniously devised transition through "proceed" to "go away."

118.

suli na, shoot (as of a banana), offspring (of man); **sulia**, to have shoots.
 Samoa: *suli*, shoot of a banana, son of a chief. Tonga: *huli*, a plant, a sapling, a shoot (as *huli fuji*, the shoot of the banana).
 Niuē: *huli*, young seed plants of the taro. Hawaii: *huli*, the name of taro tops for planting. Maori: *huri*, seed. Rapanui: *huri*, a stalk. Mangareva: *huri*, banana shoot.
 Viti: *suli*, a banana sucker.
 Mota Maligo: *suliu*, a sucker from roots, a shoot from tubers.
 Mota Veverau: *sului*, id., and children, offspring.
 Hebrew: *neser*, a sprout, shoot, offspring.

119.

tāfa, a hill, lit. that which goes up or is high; high, above.
 Samoa: *tafa*, the side of a hill. Rapanui: *taha*, to lean, to incline; *tahataha*, boundary, frontier; *hakataha*, to turn aside, to decline, to be on the side.
 Tigre: *dayaba*, to go up. Ethiopic: *diba*, above.
 A squinting etymology.

120.

tera, to be quick, swift.
 Samoa: *telea'i*, to run quickly; *teletele*, to be quick, step out; *televave*, *telelise*, to be very quick. Futuna: *telekaki*, to run swiftly, to go with speed; *televave*, one who goes swiftly. Mangareva: *tere*, to go well, to sail well. Maori: *tere*, to move swiftly, to be quick. Sikayana: *tere*, to run. Fotuna: *no-tere*, id. Rapanui: *tere*, id.; *hakatere*, to urge to haste.
 Arabic: *darra*, to run vehemently or swiftly, to turn a spindle very swiftly.

EFATE-MELANESIAN-VITI-POLYNESIAN.

121.

barab, baraf, barau, baram, long, high (as a hill).
 Tonga: *baleva*, tall, long, overgrown.
 Viti: *mbalavu*, long, generally of space.
 Malo: *barauo*, long, wide. Makelula Uripiv: *periv*, id.

Our author's association of this with *lāba* (307) expresses his curiosity rather than his acumen. The identification as here set down seems excellent; it certainly bears very prettily upon the Viti track and its extension to Nuclear Polynesia in Tonga rather than in Samoa.

122.

bi, fi, reflexive preformative.
 Samoa, Tonga, Futuna, Niuē, Uvea: *fe*, reciprocal prefix. Cf. Maori *we* in *wehanganga*.
 Viti: *vei*, reflexive prefix. Rotumā: *hoi*.

Arag, Nggela, Vaturanga, Bugotu: *vei*, reflexive prefix. Wango, Saa: *hei*. Ulawa: *hai*. Fagani: *fai*. Roro: *bai*. Kabadi: *vai*. Sinaugoro, Keapara, Kabadi, Hula: *ve*. Galoma: *be*. Pokau: *vi*. Duke of York: *we*. Motu: *he*. Nengone: *e*. Mota, Merlav, Retan: *var*. Pala: *har*. New Britain, Baravon: *war*. Kabakada: *wara*. Lakon: *va'*. Motlav, Pak, Leon, Vuras, Mosin, Alo Teqel, Gog, Norbarbar, Lo: *ver*. Volow: *vear*. Omba: *vui*. Maewo: *vagal*.

We have several elements in this problem which detailed examination will tend to simplify.

(1) The Nuclear Polynesian type, *fe*. In Melanesia this is found in Efaté *bi*, *fi*; in Duke of York *we*; in several variants in Torres Straits; and as an attrition fragment probably in Nengone *e*.

(2) The Viti type, *vei*. This I regard as the same as *fe* but representing a later development, for the *i*-suffix is well marked as verb-formative when the language is beginning to feel the need of specification in the use of the much including attributive (27 American Journal of Philology, 378).

Its fullest form is in Viti, Arag, Nggela, Vaturanga, Bugotu, *vei*; thence to Wango, Saa, *hei*.

A second series is Fagani *fai*, Ulawa *hai*.

With the single exception of Arag in the New Hebrides to serve as a link these forms are all from the Solomons, with New Guinea offshoots of Kabadi *vai*, and Roro *bai*.

Rotumā *hoi* is the second element in yet a third series, the spirant form with this vowel nowhere appearing.

(3) We now have a widespread suite with a second consonant. For this reason we must dissociate it from the foregoing. It does not come over into Polynesia with the slightest trace of the second consonant. Yet it is possible that it represents an original from which the foregoing derive by abrasion.

Its fullest form is in New Guinea in Kabakada *wara*.

With abrasion of the final vowel we have Mota, Merlav, Retan *var*; New Britain, Baravon *war*; Pala *har*. In Volow it is a characteristic peculiarity to introduce *e* before *a* in a closed syllable; its *vear* serves as a transition form to Motlav, Pak, Leon, Vuras, Mosin, Alo Teqel, Gog, Norbarbar, Lo, *ver*. The Lakon *va'* is a degeneration of *var*, dependent on the language peculiarity which Dr. Codrington records "at the end of words *r* is not trilled and sometimes with abrupt pronunciation is not heard;" it may be taken as the transition stage from the forms with two consonants to the Polynesian type. This suite is found in the Banks Group, New Britain and New Guinea.

Omba *vui* is not explained in our vocabularies. If it be permissible to regard the *u* as functioning as semivowel *w*, then *vui* might be regarded as associable with Efaté *bi*, *fi*, which also shows an uncertainty in striking the exact sound of the labial. From its close neighborhood to Arag, which has *vei*, Omba might be expected to show some form of this type.

The Maewo *vagal* seems an utter anomaly. Dr. Codrington says "it is not clear what *vagal* may be." It will be seen that *va-ga-l* suggests the common Banks Group type *var* with an infix; but we have no authority

to assume that infixation is a formative principle so remote from Indonesia. I note one more statement by Codrington: "the syllables are mostly open; indeed, though it is common to close a syllable, it is hardly looked upon as correct." If this has any bearing on the problem it may serve to indicate a probability that *vagal* is loan material.

123.

lalo na, lalu na, the belly, the front, the under side (as of cloth).

Samoa, Tonga, Futuna, Niue, Uvea, Hawaii: *lalo*, below, beneath, under, down. Nuguria: *hakalalo*, south. Maori, Tahiti, Rarotonga, Tongarewa, Bukabuka, Mangareva, Paumotu, Sika-yana, Aniwa, Fotuna, Nukuoro: *raro*, id. Rapanui: *raro*, under, leeward. Aniwa: *iraro, iroro*, under, below. Nukuoro: *kiraro*, below; *kailalopoli*, mean, stingy. Marquesas: *ao*, below, beneath, under, down. Moiki: *ngango*, id.

Viti: *irā, kirā, mairā (rā)*, below.

Mota: *lalangai*, the under side; *alalange, ilalange, talalange*, under. Motlav, Volow, Pak, Mosin, Alo Teqel: *lalange*, id. Lakon: *lalnga*, id. Vuras: *alalnge*, id. Retan, Sasar: *lalange*, id. Leon: *lalanga*, id. Merlav, Gog: *lang*, id. Vaturanga: *i lao*, id.

While I have followed our author's suggestion of identification and have carried it out to the limit of my material I remain quite unconvinced that there is anything valid in the Efaté identification. To begin with, the Polynesian material all means below, the Fijian below, the Melanesian under, except that in Mota appears also the signification of the under side which Dr. Macdonald ascribes to his Efaté. Next, so far as concerns *lalo* the belly we shall have no hesitation in bringing it into association with Samoa *alo* belly in the courtesy speech, for not only have we elaborated the probabilities of frontal abrasion, but in Efaté we have also *alo* (48) belly as a variant of *lalo*.

Assuming that Efaté has a *lalo* which has so much of the "below" sense as is suggested by "the under side (as of cloth)" we now proceed to the examination of its identification.

The identification in that sense is satisfactory so far as relates to the Polynesian. In Melanesia it will be found in Vaturanga *lao*, for an inner *l* is frequently dropped in that speech in words where Nggela retains it, a statement by Dr. Codrington which may lead to the assumption of Nggela *lalo*, although my material is empty at that point.

The Viti forms are all compounds on the base *ra*. This at best is but a half of *lalo*, and we do not claim the identification as more than a suggestion. The Viti form is not identified in Melanesia either.

The remaining Melanesian forms are all from the Banks Group and are clearly variants of one stock. The fullest forms are Mota *lalangai, lalange*; Leon *lalanga*; Retan, Sasar *lalange*. The second group is characterized by obliteration of the second vowel—Lakon *lalnga*; Motlav, Pak, Volow, Mosin, Alo Teqel *lalnge*; Vuras *alalnge* of the latter type. If we regard Merlav, Gog *lang* as a decrepit form of this stock we leave this collection a compact group identifiable with nothing in sight. It resembles *lalo* only in the possession of two *l*'s and the *a*, it nowhere suggests the *o* on which Poly-

nesia is united, and it leaves final *nga* or *ng* unrepresented in any region beyond, unless the ephelkustic *na* of Efaté *lalo na*, which our author does not explain, is really radical, in which case *lalona* represents the transition type from *lalanga* to *lalo*.

Another explanation is equally considerable. Assume that Merlav *lang* is not a broken-down form but the simple stem *lal*. The *l-ng* mutation is represented in our material solely by this possible instance. The mutation, however, occurs. It is found in two languages and both in this region, although they are Polynesian inclusions or verge islands be it said, namely in Aniwa (though not in this word) and in Moiki. The Moiki word is *ngango*, as cited above. To be sure Merlav employs the *ng* change for but one of its *l*'s. If this be considered reasonable *lalanga* and its devolved forms are then reduplications. This explanation is deficient in regard of the characteristic Polynesian *o*.

Neither suggestion is one to be held satisfactory. The identification is sadly imperfect.

124.

mabwe, the chestnut tree and its fruit.

Tahiti: *mape*, the chestnut (*Inocarpus edulis*.) Maori: cf. *mapau*, *mapou*, *mapauriki*, tree names.

Viti: *mamba*, the name of a tree, fruit edible.

Aneityum: *mop(o)*, the chestnut. Malo: *mabue*, id.

125.

tobu na, grandfather, ancestor.

Samoa: *tupunga*, ancestor. Tonga: *tubunga*, *tubuanga*, ancestor.

Futuna: *tupuna*, grandparents. Tahiti: *tupuna*, ancestor, grandfather. Mangareva: *tupuna*, grandparents, great uncle, great aunt. Niuē, Mangaia, Marquesas, Paumotu: *tupuna*, ancestor. Rapanui: *tupuna*, *tapuna*, id. Hawaii: *kupuna*, ancestor, grandparent. Uvea: *tupuanga*, parent. Fotuna: *buā*, maternal grandparent; *rufeitupuna*, grandfather and grandson. Nuguria: *tipuna*, mother-in-law.

Viti: *tumbuna*, ancestor, grandmother.

Motu: *tubuna*, grandparents, ancestor. New Britain: *tubuna*, ancestor. Tanna: *tupu(n)*, grandparent. Mota: *tupui*, one of the second generation in the ascending or descending line, ancestor or descendant. Malo: *tubu*, maternal grandparents, paternal grandfather. Baki: *kumbuo*, id. Aneityum: *etpon*, grandparents, ancestor. Malekula: *apu*, grandparents. Pala: *tubu*, grandfather. Tubetube: *tubu*, grandparents.

The identification is good throughout. In the Polynesian languages which employ both *ng* and *n* the form in *n* is used except in Samoa, Uvea and Tonga *tupunga*, etc., which are in form derivative verbal nouns from *tupu* to grow but otherwise are anomalous. The same suggestion appears in Mota, Malo, Baki, Pala and perhaps Malekula. Efaté falls in with the *n*-forms, provided that the *na* be radical.

tokalau, an easterly wind.

Samoa: *to'elau*, the northeast wind. Futuna, Niuē, Tonga: *tokelau*, the north. Nuguria: *tokerau*, southeast, the trade wind. Maori: *tokerau*, eastern. Mangaia: *tokerau*, the northwest wind. Bukabuka: *apatokerau*, north. Paumotu: *tokerau*, the north; *patokerau*, the northeast. Rapanui: *tokerau*, air, wind, fresh breeze, a squall, the noise of the wind, a season, south; *tokerau aho*, west. Tahiti: *toerau*, the west or northwest. Tonga: *apatoerau*, the south. Mangareva: *tokorau*, the north. Moriori: *tokorau*, a wind name of uncertain application. Marquesas: *tokoau*, the north or northeast. Hawaii: *koolau*, the east. Fakaafo: *Tui-Tokelau*, a divinity. Viti: *tokalau*, the east wind; *tokalaulutu*, north or northeast; *tokalaualiku*, north or northwest. Aneityum: *na-tokarau*, the northwest wind. Moānus: *tólau*, the north wind. Santo: *tokalau*, northeast wind.

Our author proposes the derivation *tok* (*toko*) to remain, *alau* on the sea. These respective elements have the assigned meanings in his Efaté dictionary. From the Efaté point of view it is a definition even if it does not particularly define. So far as I know it is the only definition, for the word is quite incomprehensible in its Polynesian elements. On his element *tok* consult 357, where it will be seen that in Polynesian it may very doubtfully be recognized in Samoan and in a sense that would in no way fit this wind or compass rhumb, and that in Viti it is primarily a posture in sitting. His element *a-lau*, *lau* the sea, he identifies in Malo *a lau*, Epi *lau* and Malay *laut* the sea. To which I may add that in Viti *lau* is the designation of the windward islands opposed to *ra* (*ra* down) the leeward islands, on either side of the central part of the archipelago which bears in that sense the name Lomaiviti. The word *lau* in the sea sense does not occur in Polynesia, nor do I recall it elsewhere in Melanesia.

If the derivation of the word lies in mystery, so is its use lacking what we should call precision.

But first the mutations, the second vowel being critical.

Forms in *a*: Viti, Efaté, Aneityum, Santo—all Melanesian.

Forms in *e*: Samoa, Futuna, Niuē, Tonga, Maori, Mangaia, Bukabuka, Paumotu, Tahiti, Fakaafo, Nuguria, Rapanui.

Forms in *o*: Mangareva, Marquesas, Moriori, Hawaii.

(Moānus irregular.)

Now we shall examine the sense, whether of wind or of direction in general.

North quadrant (from northeast to northwest by the north): Viti, Samoa, Futuna, Niuē, Tonga, Mangaia, Bukabuka, Paumotu, Tahiti, Mangareva, Marquesas.

East quadrant: Maori, Efaté, Hawaii.

South quadrant: Tonga, for comparison with Bukabuka and Paumotu shows that the prefix, of wholly uncertain signification, does not avail to establish the direction within 180°; and Rapanui.

West quadrant: Tahiti, and Rapanui with a determinant word.
Moriiori uncertain.

The only deduction we can draw from this is that the two extremes of Polynesian settlement are in accord in fixing the sense in the east. Yet the accord is only a seeming one, as we shall next see.

In all the South Sea islands we find four cardinal points: *uta*, shoreward; *tai*, seaward; *sake*, up; *lalo*, down. The latter pair are used in two dimensions: in a vertical plane their directions are absolute, up and down; in a horizontal plane their directions fluctuate, for *sake* is always up the wind and therefore windward no matter how the wind may chop and change, and *lalo* is leeward. The *uta-tai* direction may vary through opposite semicircles beginning at any point and with a range of 180°. We may not quite say that it adjusts itself always to the position in reference to the nearest visible sea of the speaker in each act of speaking, although it very frequently does so adjust itself. But for every little village community it does establish itself with reference to its own cove and there is no compass agreement on even the smallest island. The locus of the maximum discordance would be a town built on the center of a circular island, in which case every direction would be *tai* and there could be no *uta*. Thus it will be seen that *tai* and *uta* may under certain conditions coincide with *sake* and *lalo*, yet on the opposite shore of the same island they would be in diametric disagreement. This digression is introduced to make it clear that we have no positive direction sense by which to rate a norm for the *tokelau* sense of direction.

I incline to the opinion that the solution will be found to lie somewhere in relation to the one fixed index of direction in the tropical Pacific, the trade wind. This is seen in the Samoan name of the fair weather season, the *Vaito'elau*, the "time of *tokelaus*," namely, the months in which the trade blows regularly every day long from east-southeast. Let us note in how many instances we can see an easterly sense: Efaté, Samoa, Maori, Paumotu with a qualification, Marquesas, Hawaii. In the Marquesas, Samoa and the Paumotu this is clearly not the trade wind but at right angles thereto, yet such breezes are rare in the trade wind season. This makes it appear that the direction is not the wind's eye, yet that it is in some way associated therewith as a departure. The Maori must owe its easterly sense to the signification brought with the word from its earlier home, for New Zealand lies outside the trades and in the region of the westerly variables. I can not pretend to solve the problem. But I am sure that the solution will be found to lie in the identification of the *tokelau* direction in some angular displacement or departure from the prevailing trade wind in each group—or in some point from which its people migrated with the word already oriented—and this angle most probably has to do with the sailing quality of their canoes, in other words, the number of points by which they can lie the wind.

EFATÉ-VITI-POLYNESIAN-MALAY.

127.

alialia, insane; **lala**, an idiot, a fool, one demented.

Samoa: *lieliēvale*, to boast without reason. Niuē: *lialiapou*, giddy.

Uvea: *fakalialia*, deformed.

Viti: *lialia*, foolish, absurd, crazy, out of one's mind, an idiot.

Malagasy: *adala*, foolish, infatuated, a lunatic, a fool.

The identification is quite satisfactory so far as it has to do with *lialia* forms. I can not see that Efaté *lala* belongs here, and certainly the mere *l* is not sufficient to establish a Malagasy relationship.

128.

bwelū ki, **bwēlu**, **beluuēlū**, to fold, to double.

Samoa: *mapelu*, to bend, to stoop, to bow down, persons stooping with age, housebeams sagging under weight. Tonga: *pelu*,

bebelu, to fold, to crease. Futuna: *pelu*, *peluki*, to fold. Uvea:

pelu, id., *mapelu*, to bend, to bow. Hawaii: *pelu*, to double

over, to bend, to fold. Rapanui: *peu*, axe, adze.

Viti: *mbeluka*, *kambelu*, to bend, to curve.

Malay: *valuna*, folded, doubled.

The Proto-Samoan radical is **peluk**.

The Samoan *mapelu* is *pelu* with the condition prefix; *pelu* is found in use in the sense of bent, crooked. Pratt indicates *pelu*, a sword, as introduced; I incline to the opinion that it is not the word but the specific application which has been introduced, for my Samoan instructors told me that the first swords ever seen were curved (*pelu*) on the edge and hence the name. But as the first swords seen were undoubtedly cutlasses and not scimitars an armorer will have to pass on the question of fact. *Pelu'i*, also introduced, is wholly introduced, word as well as meaning, for it is clearly a transliteration of the English word billhook. Samoa and Viti lack the precise signification of *pelu* as it elsewhere occurs, yet not on that account is the identification at all doubtful.

The Malay identification shows that the word had already been abraded before the Indonesians took it from the Polynesian remnant, for only in this state could the Malay treat it in accordance with his own methods of word formation and add the *-na*.

129.

bungafunga, **fungafunga**, **bungò-ni**, to be awake, to awaken.

Samoa, Tonga, Uvea, Futuna: *fāfangu*, to rouse from sleep, to awaken. Fotuna: *no-fagona*, to awaken, to be awake.

Viti: *vāngona*, to rouse, to awaken.

Mota: *vangvangov*, *vavangov*, to waken.

Malagasy: *fuha*, awake; *mifuha*, to awaken.

In view of the fact that nowhere in the Pacific areas do we find a *ng-h* mutation, and in the utter absence of possibly intermediate Indonesian forms, we are not warranted in accepting the proposed Malagasy identification.

130.

fai, the skate.

Samoa, Tonga, Futuna, Tahiti: *fai*, the sting ray (genera: *Disco-batis*, *Dasyatis*, *Taniura*, *Himantura*, *Hypolophus*, sp. pp.; the type in Samoa is *Himantura fai*). Marquesas: *hai*, *fai*, the sting ray. Maori: *whai*, id. Nukuoro: *haimanu*, *uruhai-pokorua*, id.

Viti: *vai*, the sting ray.

Malay: *pari*, the sting ray. Tagalog: *pagi*, id.

We can not accept the Indonesian identification on account of the intrusive consonants.

The Nukuoro *haimanu* is especially interesting in connection with the fact that in Polynesia passim *manu* means bird and beast but not fish, for *haimanu* must here of marine necessity mean *hai*-fish. Dr. Codrington has pointed out (Melanesian Languages, 56, 69) that Lakon *mah* means both bird and fish and that in Maewo and Vanua Lava as *masi*, *mes*, the same word is in use for fish but not for bird. Of course it is not to be understood that he implies that *masi* is a *manu* variant. I note, however, Aneityum *numu*, Tanna *namu*, Eromanga *nomu*, the same word and all meaning fish, which it would be no straining of metathesis to associate with *manu*. Nukuoro has the *manu*-fish again in *manumangamanga*, starfish.

131.

fakau, **fikau**, a message, messenger, ambassador, agent sent to do something for a chief or community; **kau**, to carry.

Samoa: 'au, to send; *fe'au*, a message, to send for. Tonga: *jekau*, a command, an order. Niuē: *jekau*, a message. Uvea: *jekau*, a servant, a messenger, to send. Fotuna: *kau*, to send.

Viti: *kauta*, to carry.

Java: *panggawa*, a noble, title of one of the five chief councillors of state; *gawa*, to bear, to carry, to convey, to bring.

While Java *gawa* does not quite accord with the Polynesian it agrees with Viti and Efaté. But *panggawa* seems not to be *jekau*, for the term is menial in the Pacific and honorific in Java; furthermore in 122 we find no evidence that *fe-* appears at all in Indonesia.

132.

sēru, a comb.

Samoa, Futuna, Nukuoro: *selu*, a comb. Tonga, Uvea: *helu*, id. Nukuoro: *seru*, id. Niuē: *hetu* (anomalous), id. Fotuna: *seru*, id.; *ko-seserua*, to comb.

Viti: *seru*, a comb.

Malay: *sisir*, *garu*, a comb.

NOTE—Marquesas: *heu*, to scratch the ground with the hands.

Mangareva: *heru*, to reject with hands and feet; *pahere*, *pahore*, a comb. Paumotu: *heru*, to brush with the hands. Rapanui: *heruheru*, a rake. Tahiti: *heru*, to scratch as a hen; *pahere*, *pahoro*, a comb. Hawaii: *helu*, to scratch the earth as hens. Aneityum: *ero*, to scratch as a fowl.

Tregear (Maori Comp. Dict. s. v. *weku*) points out a probable inosculation of roots in a series *weku-veu-heu-heru-huru*. It is to note that the oceanic comb is not used to smooth the hair but, without disarranging the somewhat intricate coiffure, to scratch the scalp and vex its population. There is nothing in Polynesian which sheds any light upon the *l-t* mutation in Niuē, if indeed it be permissible to associate *hetu* with the *selu* stock. In the dissection of the Melanesian material a very few instances are recorded of *l-t* mutation, but they are so poorly supported as to afford little base for the opinion that such a change has any real standing.

EFATE-VITI-POLYNESIAN-SEMITIC.

133.

bwasē, bwasu, to break off with a snap or jerk.

Samoa, Futuna, Niuē, Tahiti, Paumotu: *fati*, to break, to break off as twigs or pieces of wood. Fotuna, Tonga: *faji*, id. Nukuoro, Rapanui: *hati*, id. Maori: *whawhati*, id. Hawaii: *haki*, id. Mangareva: *ati*, id. Mangaia: *aati*, id. Marquesas: *fati*, *hati*, id.

Viti: *mbasuka*, *mbasuraka*, to break.

Arabic: *faṣṣ'a*, to break off; *faṣṣa*, to detach, shiver off.

There can be no doubt of identity in Efaté and Viti, an identity which holds in respect of each of the four root sounds.

On the other hand we have substantial unity in Polynesia and the only sound in which there is identity with Efaté-Viti is the former vowel. We have no supporting instance to establish a mutation of the series Polynesian *f* Viti *mb* Efaté *bw* or *b*, and little more for the mutation *t-s*. The identification is therefore, not cordially accepted. If the Polynesian *fasi* is regarded as homogenetic with *fati* I do not look upon it as a *t-s* mutation but rather regard *fa* as the stem modulated by each consonant in turn with substantial sense agreement.

134.

firā-ni, bifirā, to supplicate, to pray.

Futuna: *pule*, to pray. Tahiti, Hawaii, Rarotonga, Mangareva, Paumotu: *pure*, to pray, worship, prayer. Maori: *pure*, to utter incantations to purify.

Viti: *mbure*, a temple, house for the gods.

Hebrew: *falal*, to supplicate, to pray.

135.

ngī, ngkī, ngiki, to creak, to squeak, to moan.

Samoa: 'i, to cry, as a fly or a bird. Rapanui: *ki*, to say. Tonga, Futuna: *ki*, *kiki*, to squeak, a sharp cry or squeal. Niuē: *kikū*, to squeak. Uvea: *ki*, a cry. Fotuna: *noh-ki*, to whistle (bird).

Viti: *ngi*, to squeak, to make a shrill noise.

Arabic: *nakka*, *nakik'*, to creak.

136.

(a) **ngor i, kor i**, to enclose or surround with a fence (*nakoro*).

Samoa: '*olo*, a fort, stronghold. Tonga: *kolo*, a fort, a town, cloth hung around a house in which a corpse lies. Futuna, Niuē, Uvea: *kolo*, a fort, tower, citadel, castle.

Viti: *koro*, a town, village, settlement.

Arabic: *ḥigr'*, *hogr'*, a fence. Ethiopic: *hagar*, a town, village.

(b) **koro**, a halo around the moon.

Maori: *aokoro*, *pukoro*, a halo around the moon.

Viti: *virikoro*, a circle around the moon.

Arabic: *ḥagara*, to have a halo.

There is complete accord from Efaté through Viti to Polynesia in the main use of this stem and in the particular use which is set to itself apart. In Efaté *koro* answers equally well for fence and for halo. In the marked advance which characterizes social life in Viti and among the Maori the need has been felt of qualifying *koro* in some distinctive manner when its reference is celestial. In Viti *virimbai* has the meaning of putting up a fence (*mbai* fence); *vir* does not appear independently in this use, but it is undoubtedly homogenetic with Samoan *vili*, which has a basic meaning of going around; *virikoro* then signifies the ring-fence-that-goes-about, sc. the moon. In the Maori, *aokoro* is the cloud-fence.

The Semitic here is trilateral. While the sense concord is notable, the form resemblance involves only the second and third Semitic consonants and we are left without explanation of the first, no shadow of which appears in our Pacific areas.

137.

kabu, koau, the native pudding, tied up in a bundle and cooked in the oven; **kofu sa**, to wrap up or enclose (as a pudding in leaves to be put in the oven). The pudding *koau* is laid on a mass of leaves very wide and long which are rolled up or over it all around completely enclosing it and then tied up.

Samoa: '*ofu*, food tied up in a leaf ready to cook. Tonga: *kofu*, to wrap up. Niuē: *kohukohu*, to enclose, wrap up as in a taro leaf. Maori: *kohu*, to cook in an oven any article contained in a hollow vessel. Tahiti: *ohu*, food tied up and cooked in a bundle. Uvea: *kofu*, clothing. Rapanui: *kahu*, clothing, cloth.

Viti: *kovu*, banana leaf in which puddings are done up.

Arabic: *kabba*, to make food into balls for cooking; *kobbat*, *kabab'*, food so cooked; *kabkaba*, to be wrapped up, enveloped.

Our author cites *koau* as a dialectic form of his theme *kabu*, which hardly seems likely. The identification eastward with *kovu* and *kofu* is satisfactory. The clothing signification in Viti and Polynesia is derivative, and since that secondary sense does not appear in Efaté it has not seemed necessary to give it extended consideration.

The Arabic certainly shows resemblance in form and, so far as is admissible in a different practice of kitchen mechanics, in sense also.

138.

lako, loko, laku, loku, roko, nrok, to stoop, to be curved.

Samoa: *lolo'u*, to bend down or around. Tonga: *loku*, to draw together, to gather in sewing, to pucker in a heap. Futuna, Niuë: *loloku*, to bend, to curve. Hawaii: *lou*, to bend around; *loulou*, to bend down. Maori: *roku*, to be weighed down, to decline.

Viti: *roko*, a bowing posture, bent like a bow; *rokota*, *vakarota*, to bend a bow; *rokova*, to pay respect to; *vakaroko*, to bow down with weakness, to go stooping.

Arabic: *raka'a*, *roko'*, *ruku'*, to stoop, to be curved or bent, to bow or be bent down.

139.

(a) **nabwo, nabwoa, tamo**, to smell (intransitive). Cf. 221.

Samoa: *nāmu*, odor, to have a bad smell. Tonga: *namu*, to smell; *namuaa*, *namuku*, bad in smell. Futuna: *namuku*, to smell bad. Niuë: *namu*, a smell; *namuā*, bad smelling. Uvea: *namu*, *nanamu*, odor; *namuku*, a stench. Tahiti: *naminami*, stinking; *namurea*, savor. Nukuoro: *namu*, *namo*, a scent, a smell. Fotuna: *ehnamu*, to stink.

(b) **bwoa, bwon**, odor, to emit odor.

Samoa: *poapoā*, fishy smelling. Tonga: *boa*, the smell of fish; *tauboa*, to scent the water with fish to catch others. Futuna: *poa*, *popoa*, to smell fishy. Maori: *poa*, to allure by bait, to chum. Tahiti: *parupoa*, to bait for fish. Hawaii: *po*, *puia*, to emit odor. Mangareva: *poa*, bait, oil cast on the water to attract fish; *akapoa*, to communicate a smell of flesh to the water to attract fish.

Viti: *mboi*, to smell, to yield a perfume.

Arabic: *fāḥa*, to emit odor.

In comparing *bwoa* and *nabwoa* we suspect the *na* to be verb-formative in much the same use as the *no* thus employed in neighboring, but far more distinctly Polynesian, Fotuna. Thus there can be no association of *nabwoa* with Polynesian *namu*. As relates to *tamo*, clearly not of the same stem as *nabwoa*, Nukuoro with two forms might seem to provide the transition, but this affects only the unaccented final vowel, the least important detail. This leaves us the far more difficult problem of establishing a *t-n* mutation. This does not exactly appear in the Efaté material, the nearest approach being *t-ng* found in *mauta-maunga* (61) as this instance is solitary. So, in the wider Melanesian field we find but a solitary instance, *namu* (328) mosquito Alo Teqel *tom*. The identification is not established.

The formal identification of *bwoa* with the *poa* of the eastern islands is satisfactory. We are to note that in Polynesia the sense is highly specialized except in Hawaii, which, with Viti, is identical with Efaté.

140.

nasu na, juice, that which flows out or exudes.

Samoa: *sū*, *ngasū*, wet; *sua*, juice. Futuna: *sū*, watery; *sua*, juice.

Nukuoro: *suisui*, wet. Tonga: *huhu*, wet; *hua*, *huhua*, juice;

huai, to pour out; *ngahu*, damp, moist. Niuē: *huhua*, liquid.

Uvea: *huai*, to pour; *huhua*, sap. Nuguria: *hua*, coconut water. Hawaii: *hu*, to overflow. Tahiti: *u*, to be damp, wet.

Viti: *suasua*, wet, moist.

Arabic: *nazza*, to exude; *nizu*, flow, water.

While there is a close association in all the material here collected we are to observe that in the Polynesian three forms exist, that Samoa and Tonga possess all three, that Futuna alone has two. These three forms are *su*, *sua*, *ngasu*.

su: In the sense of wet this is found in Samoa, Tonga, Futuna, Tahiti. The Hawaiian *hu* is in form a variant of *su*, but while the sense has to do with liquids it does not conform to the meaning of this stem as elsewhere found. Nukuoro *suisui* I regard as a derivative of *su* by means of the verb-formative *i*.

sua: Is found in Samoa, Futuna, Tonga as juice; in Uvea specialized as sap; in Niuē as liquid or as juice; in Nuguria still more highly specialized as the water of the coconut. The Tonga and Uvea *huai*, a verb-derivative of the *sua* stem, means to pour; this is comparable with the Hawaiian *hu* as showing probably the coming up to the surface of a primordial general signification which elsewhere does not break through the highly particular sense, and this will be taken to include the Niuē in the sense of liquid.

ngasu: This is confined to Samoa and Tonga and has the particular meaning of *su*, wet, damp, moist.

The Viti is of the *sua* form but of the *su* sense.

The Efaté is of the *ngasu* form but of the *sua* sense.

The manner of the interrelation of these three forms is by no means simple. If *su* meant wetness then *sua* would follow in the adjectival sense of being wet, in the common Samoan system of formation. We see here the opposite movement, which is anomalous; yet it will serve to fix the position of Viti as regular. *Su* is clearly the basic element of all these words which carry the common sense. I am not familiar with any use of a prefixed *nga* which has but the object of forming merely ornamental compounds, for *ngasū* equals *sū*, and in Tonga *ngahu* equals *huhu*. In Efaté *nasu* we note that it is impossible that it is *na-su*, for *na* is expressly not the article. We have but one other instance (125) of the Efaté *n* representing a Polynesian *ng*.

The Samoan *suati* is the equivalent of this Tonga-Uvea *huai*. The form of the Viti *vakasuasutaka*, to wet, gives ground for the impression that the *t* is radical, vanishing somewhat unusually from *huai*. We should then have the stem *suat* and by progressive degradation reach *sua* and *su*.

Provisionally we may hold *nasu* to be the remnant of a parent *nasuat* which has undergone in general an abrasion at each end. In this view it seems particularly difficult to understand how the Semitic, instinct with the zeal for triliteralism, should have come to sacrifice the already existing third consonant and then have reached exactly the same stage of demolition as in Efaté and the heart of Nuclear Polynesia, and all this without having left a trace in crowded Melanesia and Indonesia which intervene. A resemblance rather than an identification.

141.

(a) **rat i, tat i, nrat**, to loosen, to unite.

Samoa: *tala, tatala*, to loosen, to untie. Tonga: *tatala*, to tear off, to separate what adheres, to open, to rend. Futuna: *tala, tatala*, to loosen, to untie, to disunite. Hawaii: *kala*, id. Maori: *tatara*, loose, untied. Tahiti: *tatara*, to loosen, to untie. Nuguria: *taraki*, to open. Marquesas: *taataa*, separated, loosened.

Viti: *ndala*, to be open (of a shellfish); *ndalangā*, to open one's mouth.

(b) **mirati, minratinrat**, to be loose, untied.

Samoa: *matala*, to be open (as a leaf), untied, unloosed. Tonga: *matala*, open, expanded (as a leaf or flower), free from restraint. Futuna: *matala*, open, untied. Niuē: *matala*, to open, as a flower or leaf. Hawaii: *makala*, to open, to untie, to unloose. Maori: *matara*, untied, untwisted. Tahiti: *matara*, untied, disentangled, loosened. Rapanui: *matara, patara*, to untie, to acquit, to clear; *patara*, to let loose. Mangareva: *akamakara*, to cut the first thread so as to unravel anything. Mangaia: *matara*, to be loosened. Paumotu: *hakamataratara*, to unloose.

Viti: *mathala*, clear, plain, understandable, to be unfolded as a leaf.

Hebrew: *nat'ar, hitir*, to loose.

The metathesis is evident.

As between the groups of words here assembled the Efaté *mi* is the equivalent of the general *ma* of condition. In the Polynesian of each group we find no further evolution of meaning than will readily be reducible to the basic signification upon which Efaté and Samoa are in exact accord.

The Viti merits consideration. We have instances in which the Polynesian *t* becomes the Viti *nd*; we have instances of the *t-th* mutation; this so far as I can recall is the only instance in which *t* becomes both *nd* and *th*. From the instances presented in this work we might be led to the conclusion that *t*-initial becomes *nd* and *t*-medial becomes *th*. That this is not the case is doubly instanced in words not included within the essential limit of this work; for example, *tea-thea, mutu-mundu, fiti-vindi*. We can but note the anomaly.

The final vowel is weakened in Efaté and tends to vanish. In the dialectic forms we see a tendency toward nasal reinforcement of the *l-r*, which is unusual. The dialectic form *tati* may indicate an *l-t* mutation from the *tala* stem or it may be an *r-t* mutation from the metathetic Efaté *rat*i stem. We have no record of such *l-t* mutation between Polynesia and Efaté; in the wider Melanesian field we find it in but a solitary instance *sala* (339) path Bugotu *hatautu*. I incline, therefore, to consider it due to merely local variation.

142.

ror, lor, the oily juice of grated coconut used to moisten or fatten puddings.

Samoa: *lolo*, oil, the coconut prepared for making scented oil; *loloji*, a dish of taro and coconut juice. Tonga, Futuna, Niuē, Uvea, Nukuoro, Nuguria: *lolo*, oil. Hawaii: *lolo*, brains, marrow.

Maori: *roro*, id. Tahiti: *roro*, the brains of mankind. Mangaia: *roro*, brains. Mangareva: *roro*, soft, pure milk from the breast or from coconuts, the skull, the head. Paumotu: *takaroro*, headache. Rapanui: *roro*, brain, skull.

Viti: *lolo*, milk of the coconut squeezed from scraped kernel.

Arabic: *rā'a*, to moisten bread with fat.

In Efaté and Nuclear Polynesia we find complete accord upon the particular signification of the word. In the Polynesia of the Tongafiti swarm we find the word identical in form, but in sense in complete accord upon a different signification, to which brain meaning the ultimate migrations have added in Hawaiian and Maori the meaning of marrow. Along the Tongafiti track the word for oil is *sinu*, which appears in Nuclear Polynesia concurrently with *lolo*, and in the western verge in Ticopia. Now in Nuclear Polynesia the word for brain is derived from the coconut but from another part, the spongy substance (*uto*) which in an old nut occupies the space where the water has been: Tonga, Uvea, *uto*; Niuē, *uhoniū o he ulu* (coconut sponge of the head): Samoa, *uto*, the head as a term of abuse, while for brains yet another coconut product is employed, one advanced in manufacture, *fa'i'ai* the cooked juice, which in Futuna *faikai* is restricted to the literal sense. This *uto* also signifies marrow in Tonga, Uvea, Viti (*uto ni sui*).

We next pass to the southeastern terminus of all possible migration, Mangareva and the Paumotu. Here we pick up once more the coconut milk in Mangareva *roro* and find it extended to the human breast. Conjoined with this we find a strange variation from the Tongafiti sense, a passage from the soft parts to the hard, from the contents to the calvaria. Here the word *uto* means marrow, *utuhupoko* brains. Altogether a strange fact and remote spot in which to find an inosculation of Proto-Samoan and Tongafiti. Rapanui unites the soft and the hard parts in this word.

The *lolo* reappears in such parts of Nuclear Polynesia as have the animal as a component of Samoa *palolo*, Tonga *balolo*, Viti *mbalolo*. I cite a note on this subject which I wrote out for Dr. William McMichael Woodworth, who identified the *palolo* as the posterior epitokal part of *Eunice viridis* (Gray):

Stair's derivation from *pa'a-lolo*, luscious crab, is out of all consideration; it is on all fours with the classic definition of a crab as a small red fish that walks backward, for *pa'a* (*paka*) could not in the Samoan system of word structure undergo such a syncopation as to cut itself in two. As the bit beastie is in no sense a crab, and I must claim for my islanders that their intelligence is sufficiently high to prevent them from putting two such dissimilar animals together, so in turn is *lolo* not luscious. The organs of sense perception by which the Samoan apperceives *lolo* lie, not in the peripheral nerve endings of the tongue, but of the fingers; it is a matter of touch and not of taste such as luscious principally connotes. I got a very instructive glimpse at this word from my cook boy and a dish of vermicelli soup. After it had served my uses the tureen went back to the kitchen. I found the servitor dabbling his fingers in the dish, which he pronounced to be *fa'alolo*. I regard the primal signification as one of consistency, somewhat custardy, a substance partially solid that may to a certain extent be grasped in the fingers yet which seems to slip out and elude the grasp. That, it will be noticed, is a thread that can be run through all the significations. It applies equally to the *palolo* as you feel it in the water on the great day of its appearance. In the slightly specialized sense of slippery it applies similarly to its other two compounds in the Samoan, *ngalolo* and *umelolo*, both being fishes and the latter a variety of *Naseus lituratus* or *unicornis*.

143.

suki, to stick, to stab.

Samoa: *su'i*, to sew, to stitch. Nukuoro: *suki*, to pierce, to stab.

Tonga, Futuna, Niuē, Uvea: *huki*, to pierce, to prick, to puncture, to lance. Maori: *huki*, pierced. Marquesas: *huki*, a small stick used to strengthen thatch. Rapanui: *huki*, to transpierce. Mangareva: *huki*, to pierce (said of lightning); *ukiuki*, piercing, lancing. Paumotu: *hukihuki*, to bore, to perforate. Tahiti: *hui*, to pierce, to prick, to lance. Hawaii: *huiuna*, a seam, a uniting by sewing together.

Viti: *thuki*, a digging stick.

Lambell, King, Lamassa: *suki*, to sew. Lambell, Lamassa: *suki*, to prick. Moānus: *susui*, to sew.

Arabic: *s'akka*, to transfix with a spear.

The root **suk** retains its *k* except in Tahiti and Hawaii, where this loss is normal, and in Moānus. Our data instance two stems in Moānus involving *k*; in this instance *k*-medial vanishes; in 305, there initial, it remains; of course these two instances are not sufficient to establish the usage.

144.

takutaku, to speak.

Samoa: *ta'u*, to tell, to mention, to announce, to certify, to acknowledge. Tonga: *taku*, to call by, to designate; *takua*, to mention, to call by name. Rapanui: *taku*, to predict. Maori: *takutaku*, to threaten, to recite imprecations. Fotuna: *no-tukua*, to confess.

Viti: *tukuna*, to report, to tell.

Arabic: *naṭaḳa*, to speak.

The Fotuna word is no more divergently specialized away from the plain sense of Efaté and Viti than is the Tonga or the Maori; it is particularly interesting because it confirms the Viti vowel plan.

In the proposed Semitic identification a syllable is supposed to have been worn away by frontal abrasion in passing from a common parent to the Pacific, or the Arabic has picked up a syllable. Without confirmatory evidence of intermediate forms this assumption is too violent.

145.

tui, a chief.

Samoa: *tui*, a chief, king. Tonga: *tu'i*, a king, a governor. Futuna: *tui*, god, supreme ruler, king (of god only). Niuē: *tui*, a high chief. Uvea: *tui*, king.

Viti: *tui*, king or principal chief.

Arabic: *waddu*, *watadu*, *watada*, to fix, stake, make firm. Hebrew: *yated*, a pin, a nail, a prince.

No explanation is offered of the anomalous ' in Tonga *tu'i*. The character is seldom used in Tongan and is not noted at all in Shirley Baker's grammar of the language. How inconsistent with himself he is in regard of this character in the dictionary is exhibited in this suite: *ma'u* to get

(Samoa *maua*), *maugataa* hard to get, *ma'ugofie* easy to get. It seems to me that he has inserted ' into *tu'i* in order to differentiate that word to the eye from five other meanings of *tui*. Those of us who had the pleasure of knowing Tonga under that polemical missionary-statesman will have no difficulty in comprehending why he should see fit to accentuate the ruling power. Other than this slight visible but inaudible deviation the word is identical throughout Nuclear Polynesia and in Efaté, to which it is limited. It can have no possible connection with Semitic words for stake.

146.

tuku, to go down, to sink down, to lower.

Among the many uses of the apparently cognate Polynesian *tuku* I select only such as concord with the Efaté *tuku*, for a close study of the Samoan *tu'u* (yielding no selection for this purpose) leads to the feeling that it is the remnant of several dissimilar stems.

Maori: *tuku*, to subside, to settle down. Tahiti: *tuutuu*, to slacken or ease a rope. Hawaii: *kuu*, to let down, to slacken. Tonga: *tuku*, to slacken, to let go as a rope; *tukutuku*, to sink in the sea. Futuna: *tuku*, to put down. Niuē: *tuku*, to bury. Rarotonga: *tuku*, to let down, to let out, to drop down. Manga-reva: *tuku*, to throw the fishing net or fillet. Paumotu: *tuku*, to lay down. Sikayana: *tuku*, to put down. Nukuoro: *tuku*, to permit, to allow. Manahiki, Fakafo: *tuku*, to place. Nuguria: *tuku*, to set. Rapanui: *tuku*, to give, to accord. Viti: *tukutha*, to let go, to slacken a rope; *vakatukutha*, to let down in a basket. Hebrew: *s'uah*, to sink down. Arabic: *sah'a*, *ṣah'a*, *tah'a*, *t'ah'a*, id.

EFATE-MELANESIAN-POLYNESIAN-SEMITIC.

147.

bano, to go, to go off or away.

Samoa: *fano*, passing along. Tonga: *fano*, to go, used in reference to small fish going in shoals. Futuna: *fano*, to go, to depart. Niuē: *fano*, to go, to walk; *fenonga*, a journey. Tahiti: *fano*, to set sail, to depart. Paumotu: *fano*, to set sail. Aniwa, Sikayana, Vaté: *fano*, to go. Nukuoro: *hano atu*, to go, to depart; *hano saine*, to go around. Nuguria: *uhano*, to go. Maori: *whano*, to go on. Tongarewa: *hana*, to go. Mangareva: *ano*, to appear. Uvea: *fangona* (metath. *fanonga*) road, path, to go a journey. Fotuna: *no-fano*, to walk, to go. Baki, Epi: *mbano*, to go. Meli, Fagani: *fano*, id. Maewo, Malo, Baki, Mota Veverau, Motlav, Vuras, Merlav, Gog, Lakon, Santo, Vaturanga, Bugotu: *vano*, id. Volow: *vono*, id. Malekula, Marina, Omba, Arag, Mota Veverau, Volow, Leon, Sasar, Mosin, Alo Teqel, Norbarbar, Maewo: *van*, id. King: *vanwin*, to come. Lo: *ven*, to go. Bierian Epi: *mbene*, id. Tanna: (t) *uven*, id. Eromanga: *ve*, id. Mota Maligo, Ambrym,

Sesake, Nggela, Belaga, Pak: *va*, id. Aneityum: *apan*, *han*, id.
 Pala: *han*, id. Duke of York, Matupit: *wan*, id. Kabakada,
 Matupit, Baravon: *wana*, id. Lambell: *han*, id. King: *ivuan*, id.
 Norbarbar: *vana*, a going. Vuras, Gog, Lakon: *vanog*, id.
 Motlav: *navnog*, id. Tangoan Santo: *thano*, to go.

Hebrew: *panah*, to turn the back, to turn to go.

See note 11.

With the readily adjustable exception of the metathetic form in Uvea the Polynesian is a unit and in perfect identification with Efaté *bano*. Other Efaté forms are *banōmai*, *banāmai*, *banīmai*, compounds with directive *mai*; *banōtu*, *bīnōtī*, *bānāts*, *bīnāts*, compounds with directive *atu*, with which our author most cryptically includes *binēn*, *baina*, *nōtu*, *nēt*; *bā-ki*, which he says is "contracted for" *ban*, *bano*, while *bā* (11) is not.

In considering the word in Melanesia we observe that there is a partition into two markedly unequal areas according as the radical vowel is *a* or *e*, to which is to be added the single instance of Volow which has *o* for *a* (neutral vowel).

The *a*-series has a wide range among the labials from *b* to *v*, but the forms in *v* are far the most widely spread. The only exception to this vertical mutation is the Tangoan Santo involving a *f*-*th* or horizontal mutation, that is from labial to lingual, a change of which we have no other example, yet in this case it seems quite correct. Aneityum, Pala, Lambell *han*, according to my principle of the aspiration, is a vertical mutation. It may be that in this we see a transition form to Tangoan Santo *thano*; a labial *h* reached vertically would in no way, save with the resources of comparative philology, be distinguishable from a lingual *h*, and for the change from this *h* vertically downward to *th* we have abundant evidence (17 Journal of the Polynesian Society, 160). The mutation to *w* is abundantly supported and is all but vertical; it is found only in the gate by which the Samoa track leaves Indonesia, and, disregarding the extra prefix, which is probably formative, I incline to regard the *vu* of King *ivuan* as but a reinforced *w*. In Kabakada, Matupit, Baravon *wana* we shall best regard the final vowel as an *o-a* change within the triangle of the neutral vowel; the *a*-final in Norbarbar *vana* is formative and establishes the verbal noun of *van* to go, as appears above. In Vuras, Gog, Lakon, Motlav the final *g* is formative of the verbal noun; the Motlav is *na-vno-g*, article-stem-suffix. There remain for consideration a few irregular forms. Aneityum *apan* we include because our author includes it as an identification, which it is not. *Apan* means to go, *apam* means to come; the merest tyro should recognize the common stem as *apa*, far removed from *vano* and further exhibited in *apahai* to go landward and *apaahni* to go everywhere. He quite overlooked, or did not know where to look for *han*, which is the true identification. The King *vanwin* contains the *vano* stem together with an extra element which in the paucity of our material from that center of New Ireland culture we may not comprehend.

The smaller *e*-series runs through its simple course of mutation and abrasion and calls for no more extended comment than to call attention to Tanna (*t*)*uven* as a mixed form.

We have now left for consideration the *va* and the *ve*. In each case we have a record of the abrasion of final vowel and then of the consonant left final, thus there is no reason in etymology why we should not regard them as regular mutations of the *fano* stem. Since Mota shows *vano* in Veverau and *va* in Maligo, where the differences are no more than dialectic and of neighbor dialects at that, we are forced to the conclusion that *va* is from the *fano* stem despite the efforts of our author to confuse the record as shown in 11.

We are not left to the compelling power of resemblance visualized to comprehend Dr. Macdonald's indentification of the *fano* stem with the Hebrew *panah*. Here is his extended argument in full as spread upon the record under the classification of "trilaterals doubly weak, that is, with two weak letters or quiescents."

"Efaté *bano-mai* or *bana-mai*, to come; *banats*, i. e., *ban ats*, to go; Maori *whanatu*; Efaté *bano*, to go; Maori *whano*, to verge toward, to go on, proceeding toward; Hebrew *panah*, to turn, to turn oneself, to turn the back, to turn in order to go anywhere. Thus *banotu*, *whanatu*, equals to turn, going away, or outward, and *bano-mai*, *bano-be*, equals to turn coming, to come." Any person who can find herein the common term wherein to turn equals to go will have no greater difficulty in finding in *fano* a trilateral, even though two of its letters are "weak or quiescent."

148.

bātu, bate, to close up the roof by *weaving* thatch on the ridgepole.

Samoa: *fatu*, to commence plaiting. Tonga: *fatu*, to tie rafters, to commence plaiting. Futuna: *fatu*, *jetu*, to plait. Uvea: *jetufetu*, id. Niuē: *fatufatu*, to fold; *fatunga*, a rafter. Tahiti: *fatu*, to plait, to braid. Paumotu: *pifalufatu*, to fold. Rapanui: *haatu*, to plait; *hahatu*, a plait. Hawaii: *haku*, to braid a wreath; *hakahaku*, to fold up. Maori: *whatu*, to weave. Mangareva: *atu*, to fold up.

Epi: *bofungo*, to close up the roof by weaving thatch on the ridgepole.

Hebrew: 'abat, to interweave; 'abot, wreathen work.

So far as it is given us to follow out the tangles of some of these definitions it appears that Dr. Macdonald has sought to draft a statement which should allow him to incorporate *fatu* the ridgepole with this *bātu*.

The Polynesian has a word, stem *fatu*, which signifies to plait or braid or weave or in some such way with deft fingers to reduce a tangle of shreds to order. In Niuē, Mangareva and the Paumotu the sense is restricted to one of the incident operations in this broader meaning. In Hawaii we find the two senses side by side, thus linking the two groups of meaning. With this Efaté *bātu* is in accord so far as relates to the matter of weaving which our author has distinguished by italics. This stem in Polynesia is nowhere particularly applied to thatching, this roof covering being put on by imbrication and not by interlacing.

But Tonga *fatu* to tie rafters, Niuē *fatunga* a rafter, are distinctly roof words. That, while they are identical in form with the weaving *fatu*, they are not homogenetic therewith is apparent in the existence of Efaté *fatu* a ridgepole. In Samoa the roof *fatu* is found in *fatu'ulu* the thatch next

the ridgepole, and in *fatulau* old thatch, and in *fatunga* the timbers to which the purlins are fastened. The ridgepole *fatu* is continued in the same sense to Tangoan Santo *papatu*, Malo *uobatu*, Malekula Uripiv *uobut*, and Bierian *botqu*.

The Epi word Dr. Macdonald notes as identical in sense with *bātu*, it seems in no other wise related.

149.

iki, kiki, riki, small.

The following words all mean small:

Maori: *riki*. Samoa: *li'i*. Tonga: *iki, liliki, likiliki*. Uvea: *liliki*. Nuguria: *likiliki*. Futuna: *ikiiki, liki*. Niuē: *ikiiki*. Tahiti: *rii*. Hawaii: *lii*. Rotumā: *lilii*. Marquesas: *iki*. Mangareva: *rikiriki*. Paumotu: *rikiriki*. Mangaia: *rikiriki*. Sikayana: *likiliki*. Samoa, Tahiti, Rarotonga, Manahiki, Rapanui, Maori: *iti*.

Duke of York: *lik*. Baki: *teliki*. Maewo: *riki*. Nifilole: *laki*. Motu: *malaki*. Kabadi: *marai*. Guadalcanar, Pokau: *kiki*. Tubetube: *kikiu*. Nada, Kiriwana: *kikita*. Murua: *kakiti*. Oiun: *kafakiki*. Galavi: *berokikina*. Bougainville: *kekereke*. Aneityum: *tintin*. New Georgia: *kikina*. Pak, Leon: *tiktik*. Vuras: *netui, menet*. Merlav: *wirig*. Mota: *rig*. Sasar: *wogrig*. Alo Teqel: *wowrig*. Gog: *weskit, wesekit*. Nor-barbar: *sosogut, sosogot*. Retan: *seget, sogot*. Lo: *ririg*. Omba: *mbiti*. Ararg: *tirigi*. Sesake: *kiki, ngiki*. Fagani: *kikirii*. Wango: *kekerei*. Nggela: *kikia*. New Britain: *ik*. Baravon: *ik, ikilik*. Buka: *kekereke, kikerei*. Lambell: *liklik*. Hula, Galoma: *kirikiri*. Keapara: *kiri*. Suau: *gagiri*. Sariba: *gagirini*.

Ethiopic: *dawik*, to be small.

In the three Efaté words for small the common element is *ki*. The simplest form is the reduplicated *kiki*. With a vowel prefix we find *iki*, and when that in turn is modulated by a liquid coefficient we find *riki*.

Two of these forms appear in Polynesian, *kiki* not having survived that far:

iki: Tonga, Futuna, Niuē, Moiki, Tongarewa.

liki: Maori, Samoa, Tonga, Uvea, Tahiti, Hawaii, Rotumā, Mangareva, Paumotu, Mangaia, Sikayana.

In Melanesia we find all three forms, distributed as follows:

kiki: Guadalcanar, New Georgia, Sesake, Nggela, New Guinea.

iki: New Britain, Baravon.

liki: Maewo, Baki, Nifilole, Motu, Duke of York, Lambell, Arag, Mota, Merlav, Lo, Sasar, Alo Teqel.

kiki and **liki**: Bougainville, Buka, Fagani, Wango.

iki and **liki**: Baravon.

Not immediately referable to the three forms in Efaté our Melanesian studies afford us the following forms:

kit. This may be the basic *ki* with a persisting radical final consonant, or the *t* may be an irregular accretion; it is impossible in the paucity of data to come to a conclusion. If Pak, Leon *tiktik* be *kit* under metathesis this is the simplest form. In Norbarbar and Retan, with floating vowel, we have this stem with a prefix *se, so*, common to both. In Gog I see such resemblance to Retan that I diagram its composition as *we-s-kit*.

From this stem, by a common frontal abrasion, we may perhaps derive the common word of Polynesia for small; Samoa, Tahiti, Marquesas, Rapanui, Mangareva *iti*; Tonga *jii* (metathetic), Moiki *itiiti* by and by, and Hawaii *iki* (a kappation of radical *t* and not to be confounded with the stem *iki*). This would restore to Polynesia the possession of the third Efaté stem, and it now seems to be proved by Rarotonga *ngiti*.

Omba *mbiti* we lack data to coordinate. The first impression that this is *iti* with a prefixed modulant will hardly stand against the fact that *iti* is an eastern form nowhere found in the west, and the other fact that we know of no well attested instance in which a stem which has had its head rubbed off acquires a new one by random selection.

We now are left with Vuras and Aneityum, which have the common element *net* or *tin* according as we consider the metathesis to have been applied to one or to the other. If we regard *net* as primal and as equivalent to *nit* we shall find any attempt to associate it with *iti* by frontal accretion blocked by the same bar as at Omba, and this somewhat considerable array of data affords no example of a *k-n* mutation by which we might account for it.

Uvea *sii*, with Aniwa *auhi*, may open for us a small group of Melanesian relationships in Aneityum *sisi*, Efaté *sès, sos*; Epi *takisi*, Lakon *sik*, Volow *siwi*, Motlav *su*, and thus connect with the *se, so*, element of the compound forms of Norbarbar, Retan and Gog. It should be observed, however, that Uvea *sii* devolves normally through Tonga *jii* from *iti*.

Dr. Codrington (Melanesian Languages, 81) comments "as is the case with most adjectives there is but scanty agreement in the words meaning little." I think that in working over his material quite another conclusion has been reached and that the Polynesian content is distinctly marked from end to end of Melanesia.

Indonesian affiliations are rare. We find Wahai *kiiti*, Bouton *kidikidi*, Salayer *kédi*, and beyond these three we may scarcely venture, perhaps not even so far.

In none of the foregoing is there aught which points to the Semitic identification.

150.

kiat, the sticks which cross from the canoe to the outrigger.

Samoa: *'iato*, the outrigger struts. Tonga, Nuguria: *kiato*, id.

Futuna: *kiàto*, id. Fotuna: *akiato*, id. Maori: *kiato*, the thwart of a canoe. Tahiti: *iato*, the transverse beams which

connect the outrigger to the canoe. Hawaii: *iako*, the arched

sticks which connect a canoe with its outrigger. Mangareva:

kiato, a large raft. Mangaia: *kiato*, the outrigger. Paumotu:

kiato, to pierce and cross for joining.

Tanna: *nikiatu*, the outtrigger bars.

Arabic: *h'āta*, *h'iato*, to sew, to join together.

151.

kubenga, a fish net.

Samoa: '*upenga*, a net, not restricted to fishing. Tonga, Futuna, Niuē, Uvea, Nukuoro, Maori, Rapanui, Rarotonga: *kupenga*, id. Nuguria: *kupena*, id. Aniwa: *kowpenga*, id. Marquesas: *upea*, *upeka*, *upena*, id. Hawaii: *upena*, id. Tahiti: *upea*, id. Mangareva, Paumotu: *kupenga*, a thread, a filament. Fotuna: *kaupenaua*, the neck.

Sesake: *kupenga*, a net. Mota: *gape*, id. Merlav: *gambe*, id. Gog: *gamb*, id. Lambell, King: *mbene*, id. Lamassa: *mbāne*, id. Laur: *mbān*, id. Motlav: *kmbweng*, id. Volow: *ngmbweng*, id. Pala: *ubén*, id.

Arabic: *kiffat*, a net, from *kaffa*, to wrap around.

In form the Polynesian word has the appearance of a verbal noun from some verb stem *kupe* which we do not identify, for Tregear's suggestion of Viti *kumbe* to catch hold of, to cleave or cling to, does not commend itself in signification. Against this idea militates the fact that the word has been preserved in Efaté and Sesake, termination and all. The sense is always and everywhere a net or meshed fabric, except in Mangareva where it has become limited to that of which nets are made. The Fotuna form is clearly a composite of *kupenga* and *ua* the neck, but its precise explanation is not clear.

In Melanesia we find two groups of identifications after passing Sesake as an unchanged loan word.

In the first group we have the languages which have assimilated a putative stem *kupe*. These are Mota, Merlav, Gog.

In the second group are the languages which, while abrading the first syllable, have used as their stem *penga* and have preserved more or less of the seeming noun-formative termination. In the order of their strength these are Motlav, Volow and the New Ireland group. The Pelion on Ossa of the Motlav and Volow forms, it must be remembered, are each a single sound; therefore these do not, as might seem, reproduce the full *kupenga*; it is just the Melanesian clumsiness in compassing a Polynesian *p* with lips which play havoc with the fine precision of labials.

In view of the fact that the palatal nasal is most probably radical we may scarcely accept the Semitic identification.

152.

lafi, to take up, to carry.

Samoa: *lavea*, to be removed, of a disease. Tonga: *lavea*, to bite, to take the hook, a fish. Futuna: *lave*, to comprehend, to seize. Niuē: *laveaki*, to convey. Rarotonga: *rave*, to take, to receive. Tahiti: *rave*, to take. Mangareva: *rave*, to take, to take hold; *raveika*, fisherman. Maori: *rawe*, to take up, to snatch. Hawaii: *lawe*, to take and carry in the hand. Marquesas: *ave*, an expression used when the fishing line is caught in the stones.

Mota, Omba: *rave*, to catch (of fish). Lo: *rav*, id. New Britain: *rapa*, to take by force. Nggela, Belaga: *lavi*, to take. Maewo: *lailai*, id. Arag: *lai*, id. Arabic: *rafa'a*, to take up, to carry.

Samoa *lave* has a line of significations none of which is found outside its immediate vicinity in Nuclear Polynesia. The nearest approach to the Efaté signification is in *lavea*, and that is not to be supported against the first objection that may suggest itself.

The sense of taking extends from Efaté to Fotuna and thence eastward to Rarotonga, Tahiti, Mangareva, Maori. The carrying sense is found in Niuē. The two come together no nearer than Hawaii.

The specialized use in relation to fishing is absent from Efaté; but its presence in Tonga, Mangareva and the Marquesas of Polynesia, and in Mota, Omba and Lo of Melanesia is amply suggestive of a common source. The other Melanesian identifications call for no comment, except that in Arag and Maewo; if this identification be acceptable, we have no other example in all this material of the vanishing of a *v*. These two, therefore, remain a little more than doubtful.

153.

leo, le, lo, lu, voice, speech, word.

Samoa: *leo*, voice, sound, noise. Tonga: *le'o*, voice. Futuna: *leo*, id. Uvea, Nuguria, Niuē: *leo*, voice, sound. Hawaii: *leo*, voice, sound, speech, language. Maori, Tahiti, Mangareva: *reo*, id. Rarotonga: *reo*, voice. Paumotu: *reko*, voice, speech; *reo*, the air of a song. Rapanui: *reo*, voice, language, air of a song, a tale; *hakareoreo*, a story, to tell. Aniwa: *noreo*, voice. Marquesas: *eo*, *eeo*, id. Uvea: *lea*, to say, to speak to, to accost, to address. Tonga: *lea*, speech, language. Niuē: *lea*, to speak. Rotumā: *lio*, voice. Sesake, Arag, Mota, Omba, Maewo: *leo*, the voice. Mota: *lea*, speech. Maewo: *leo*, law. Santo: *liona*, the voice. Arabic: *la'a*, to speak; *la'w*, sound, voice; *lo'at*, word, language, dialect.

The Proto-Samoan stem is **leo**, an open form and thereby readily distinguishable from *leo* (311) to watch, which stems in **leos**.

The general sense is the sound of the voice in speech or in song, and to this signification the word is confined in Samoa, Tonga, Futuna, Uvea, Niuē, Aniwa, Rarotonga, Paumotu and the Marquesas, that is to say all of Nuclear Polynesia with three tongues of the eastward migration; and the same is true of the occurrence of the word in the New Hebrides except Efaté. If Paumotu *reko* be really referable to this stem the interpolation of the *k* is anomalous. To this idea of the sound of the voice is added a connotation of the product of the voice, and we find the signification of speech, language, in Hawaii, Maori, Tahiti, Mangareva, in the Paumotu subject to the doubt already noted as to *reko*, and in Efaté. In the latter we pass still farther into particulars with *leo* meaning a word. In Maewo the secondary meaning *leo* law receives no confirmation elsewhere. On Tonga *le'o* see note 145.

In four languages, one of Melanesia and three of Polynesia, we find a different yet appreciably similar word for the expression of this latter sense in differentiation from the former. These are:

Uvea: *leo*, voice, sound; *lea*, to say, to speak to.

Niuē: *leo*, voice; *lea*, speech.

Tonga: *le'o*, voice; *lea*, speech, language.

Mota: *leo*, voice; *lea*, speech.

We are, therefore, abundantly warranted in predicating two parallel stems of which *lea*, by sense similarity and by reason of carrying its form and sense distinction nowhere else than in an unaccented final vowel, always a weak spot, has become assimilated to *leo*, this being particularly true in the regions covered by the Tongafiti swarm. Efaté we find in possession of *leo* voice; it has not now *lea* speech; we are not justified in the statement that it never had the latter, for the form *le* might survive just as well from *lea* as from *leo*.

154.

lingi-si, malingi, malingsi, to pour out, to spill.

Samoa, Tonga: *lingi*, to pour. Niuē: *lingi*, to pour in or out.

Uvea: *lilingi*, to sprinkle. Futuna, Nuguria: *lilingi*, to pour out. Maori: *ringi*, id. Rarotonga: *riringi*, to pour. Paumotu: *riringi*, to pour from one vessel into another. Tahiti: *ninii*, to pour out. Hawaii: *nini*, to spill, to pour out. Rapanui: *nininini*, to pour, to shed; *hakanininini*, to water. Marquesas: *iki*, to pour out; *iniu*, teat.

Samoa, Tonga: *malingi*, spilled. Rarotonga: *maringi*, to spill.

Paumotu: *maringi*, to suppurate. Mangareva: *meringi*, to trickle, to flow. Hawaii: *manini*, to spill or spatter out. Tahiti: *manii*, to overflow, to be spilling.

Viti: *livi*, to pour gently or in a small stream.

New Britain: *ligire*, to pour out. Motlav, Volow, Merlav, Gog: *ling*, id. Mosin: *lenglengir*, fluid. Mota: *lighigira*, *ligiu*, id.

Aneityum: *aijangjing*, to pour out.

Arabic: *raka*, to pour out.

The Proto-Samoan stem is **lingis**.

Efaté has the simple stem and at least the form of the conditional derivative in *ma*. These two there will be no difficulty in tracing through the Polynesian.

I have given room to Viti *livi* because of sense identity. Superficially it is in form a three-quarters identification. In all my close study of the Polynesian content of Viti this is the only case in which the leaping mutation *ng-v* at all suggests itself, and there is not a single confirmatory instance in this study of the broader field of Melanesia.

In the unlocalized New Britain instance collected by Tregear we are uncertain whether this *g* is really *g* or represents *ng*, a common device in the writing of South Sea languages. However this may be, in Mota there can be no doubt that *g* is *g* and represents a not infrequent *ng-g* mutation. In the other New Hebridean languages where the word occurs it has undergone

no change more serious than terminal vowel abrasion, except for a slight vowel change in Mosin. Aneityum has *aijangjing* to pour and *ajaingjanse* to pour in; this speech, so remote from either of the Proto-Samoan migration streams that it falls almost into the lowest class of quality of its Polynesian content, has been too little studied to warrant our acceptance of this identification. But we can sense a Polynesian ghost in its *j-ng-s*, all the more since the *l-j* mutation plainly appears in *lima* (312) five Aneityum *ni-jman*.

155.

liu, liliu, lilia, lēr, bilui, bilu, to turn back, return, go or come back.

Samoa: *liu, liliu*, to turn, to go backward and forward. Tonga: *liu, liliu*, to return. Futuna: *liliu*, to return, to go or come back. Niuē: *liu, liliu*, to turn, change, return. Uvea: *liliu*, to turn, to return. Maori: *ririū*, to pass by. Tahiti: *riuriū*, to go around in a circle. Mangareva: *akariū*, to come and go. Viti: *lia*, to transform, to metamorphose. Nggela: *liliu*, to change, to turn away.

The identification of *liu* is complete through all these notes. With the dialectic occurrence of Efaté *lilia* there need be no hesitation about admitting Viti *lia*.

156.

manuka, a wound.

Samoa: *manu'a*, a wound. Tonga: *manuka, manukaia*, to kill, murder, applied to chiefs. Fotuna: *manuka*, a sore, an ulcer. Nuguria: *manua*, to wound. Mota Maligo: *maniga*, wound. Mota Veverau: *manuga*, id. Bierian: *manika*, a sore, an ulcer. Baki: *menuko*, id. Laur: *manug*, a sore, an ulcer, an abscess. Baravon, Pala: *manua*, wound. Malekula: *menu*, a sore, an ulcer. Arabic: *naka'*, to wound. Hebrew: *nakah*, id. Ethiopic: *nakaya*, id.

It is interesting to note that while on the one hand this word is confined to Nuclear Polynesia it occurs on the other not only in the New Hebrides but even so far back along the Samoa track as the east Indonesian gate. Tonga makes far less use of the courtesy speech, the Polynesian Basakrama, than does Samoa. In Samoa *manu'a* is an open word, the wound of a chief is *māsoe*. It would appear that Tonga *manuka* was an importation from Samoa and was set aside for courtesy use as being a foreign novelty. Any note is valuable which tends toward the elucidation of the differentiation of Proto-Samoan and Tongafiti in Tonga.

157.

nākbe, a hollowed log used as a drum.

Samoa, Tonga, Uvea, Niuē: *nafa*, a drum.

Malekula Uripiv: *nambwi*, a drum.

Hebrew: *nekeb*, a hollowed thing used as a musical instrument.

158.

ruma, the breast, bosom.

Maori: *uma*, the breast, bosom. Samoa: *uma*, a wide chest. Tonga, Futuna, Uvea, Niuē: *uma*, the shoulder. Nuguria: *uma*, breast of a man. Marquesas: *uma*, the breast. Hawaii: *umauma*, id. Tahiti: *ouma*, id. Rapanui: *huma*, breast, chest.

Sesake: *ruma*, the breast. Dobu: *rumaruma*, id. Buka: *nunume*, id. Motu: *geme*, id. Galoma: *komakoma*, id.

Arabic: *ha'zūm'*, the breast, the bosom.

Frontal abrasion is so well established that we need have no hesitation in accepting the identification of Melanesian *ruma* and Polynesian *uma*. The *r-n* mutation which will admit Buka *nunume* is the most frequent *l-r* change in Polynesia, and in the Solomon Islands finds support in *lima* (313) hand Saa *ninime*. Motu *geme* is much more remote and uncertain, and does not well accord with the high quality of the identifications in that Torres Straits migration station; the *r-g* mutation finds a measure of support in the *l-k* mutation *lima* (313) hand Vaturanga *kima* Nggao *kame*, where, however, Motu has the abraded *ami*. Galoma with its *k* form adds confirmation.

159.

ruru, to tremble, an earthquake.

Samoa: *lūlū*, *lue*, to shake. Tonga: *luelue*, to roll; *lulu*, to shake. Futuna: *lulū*, to tremble, to shake, to agitate. Niuē: *luelue*, to shake; *lūlū*, to shake, to be shaken. Nuguria: *ruhe*, motion of the hands in dancing; *luke henua*, an earthquake. Uvea, Hawaii: *lu*, *lulu*, *lululu*, to shake, to tremble, to flap. Fotuna: *no-ruruia*, to shake. Maori: *ru*, *ruru*, to shake, an earthquake. Tahiti, Rarotonga, Rapanui, Paumotu: *ruru*, to shake, to tremble. Mangareva: *ru*, to tremble; *ruru*, to shake. Marquesas: *uu*, to shake the head in negation; *uuuu*, to shake up. Uvea: *ue i*, to shake; *ueue*, to move. Rapanui: *ueue*, to shake.

Nguna: *ruru*, a trembling. Mota: *rir*, to quake, an earthquake. Syriac: *r'el*, to tremble.

Here we seem to have a common stem in two states.

The simpler is *lu*. This is found in its bare state in Uvea, Hawaii, Maori and Mangareva. With a persistent reduplication, *lulu*, it is found in all the above and in Samoa, Futuna, Fotuna, Tonga, Niuē, Tahiti, Rarotonga, Paumotu, Rapanui and the Marquesas, Efaté, Nguna and Mota. In Hawaii it appears in triplication, and in the Marquesas even in quadruplication.

The modified stem is *lue*. This is nowhere found to the exclusion of *lulu*, but with it is found in Samoa, Tonga, Niuē and Uvea; that is, it is a Nuclear Polynesian type.

While there can be no difficulty in form or sense involved in the Mota identification we notice the confirmatory agreement of Mota and Maori in the particularized seismic meaning.

160.

taru-si, taro-si, tarotaro, to pray.

Samoa: *tatalo*, to pray; *talosanga*, a prayer. Futuna: *tatalo*, to imprecate, to desire. Tahiti: *tarotaro*, to pray. Rapanui: *tarotaro*, a malediction, to curse. Hawaii: *kalokalo*, to pray to the gods, to supplicate favors. Nukuoro: *tarotaronga*, a prayer.

Mota, Arag: *tataro*, a prayer.

Arabic: *ṣala'*, to pray. Ethiopic: *ṣalaya*, id. Chaldee: *ṣela*, id.

The Proto-Samoan stem is **talos**.

The word has passed along its course with little variety in form or signification. Tregear, with such recognition of doubt as the cf. note may carry, associates with this stem the Maori *tarotaro* to cut the hair. His explanation "that the cutting of hair among Polynesians was generally accompanied by a solemn and religious ceremony," while unimpeachable as a statement of manners and customs, seems, for the purposes of philological comparison, an impossible exaltation of the incident over the essential.

161.

taumafa, taumofa, to invoke or pray while sacrificing or giving an offering.

Samoa: *taumafa*, to eat, to drink (of a chief or a chief's pigeon).

Tonga: *taumafa*, to eat, applied to the Tuitonga but now used to high chiefs. Futuna: *taumafa*, a thank-offering to the gods or to a chief. Niuē: *taumafa*, to eat, used to chiefs only.

Uvea: *taumafa*, a religious feast, to eat. Fotuna: *taumafa*, an offering to the gods. Nukuoro: *taumaha*, *taamaha*, a feast, a sacrificial feast; *hakataumaha*, to forbid. Maori: *taumaha*, a thank-offering to the gods; *whakataumaha*, to offer in sacrifice. Tahiti: *taumaha*, an offering of food to the gods. Hawaii: *kaumaha*, a sacrifice, to offer in sacrifice, to kill a victim for sacrifice. Rarotonga: *taumaa*, to curse. Mangareva: *toumaha*, a prayer offered up before a feast or a meal, to offer first fruits to a god.

Malekula Pangkumu: *tomav*, to offer in sacrifice.

Hebrew: *habhabim*, offerings.

The Proto-Samoan stem is **taumafat**.

The identifications show remarkable accord in form and sense. It is only in Samoa, Tonga, Niuē and Futuna, strictly Nuclear Polynesia, that the word is applied at all to mortal men. It might be taken as a piece of gross flattery to the chiefs to assign to their eating the word which belongs to the great gods. In my understanding of the spiritual ideas of this central area of Polynesia, which holds the most primal concepts of the race, it seems more reasonable to regard the word as originally belonging to the great chiefs (Polynesian Basakrama) and thence extended to the divine essences when the Polynesians had learned to make gods in their own image.

Dr. Macdonald finds no difficulty in accounting for the word as a composite of materials now in Efaté, *tau* to pray or invoke, *mafa* (*mofa*) giving or offering. The latter element he thus explains: "when the blood of men

or animals has been shed and forms a pool on the ground, one feeling the smell of it, or of any similar thing, says *i nabwo moja*, it smells *moja*," and identifies it with Arabic *ma'habat* a small pool, *wahaba* to give, to make an offering. Yet in the foregoing there nowhere appears for *moja* the sense of giving or offering which without hesitation he assigns when dealing with it in the *taumaja* composition. The only sense which may be derived from the narrative, not definition, of *moja* is to say that when the smell of blood is felt, if indeed that be possible in sense perception, and one says it smells *moja* the word is meant to describe the apperception of shed blood by the nose. Not in the least inclined to accept the circuitous Arabic identification I see in *moja* no suggestion of the radical *t*.

Working on different materials Tregear has isolated *tau* to pray in Tahiti and the *maja* of *mamaja* heavy. The latter at least is Proto-Samoan **mafāt**. But *tau* nowhere else in Polynesian means to pray. Bishop Jaussen gives *tau* in the prayer sense but altogether omits *tarotaro* (160), which Tregear must have obtained from English missionary sources. Assuming the substantial accuracy of the bishop's dictionary it is possible that Tahiti *tau* by the not infrequent loss of *l* (e. g., *valu* eight Tahiti *vau*) may be associable with *talo* to pray. The association with **mafāt** is excellent in the preservation of the radical *t*, but the correlation of sense leaves much to be desired.

162.

tau-ri, to bind, to be bound firmly to, to marry (a woman), to tie firmly to (as a boat to a ship to be towed); **taura ki**, to be fixed or bound firmly to one, bringing out one as from bondage or from her relations, to redeem, to marry; **bitauri**, to be bound, tied, attached firmly to each other, to be married.

Samoa: *tau*, *taulia*, to be anchored, to be fixed (as colors in cloth); *taula*, an anchor; *taulanga*, anchorage; *taula'i*, to anchor with or to; *tauvale*, to marry beneath one. Tonga: *taulanga*, anchorage; *taufau*, to tie. Futuna: *taula*, an anchor, a cable; *taulanga*, anchorage. Niuē: *taula*, an anchor. Uvea: *taula*, an anchor; *taulanga*, anchorage. Nukuoro: *taura*, a rope. Maori: *tau*, to lie at anchor or moorings; *taura*, a rope; *tauranga*, anchorage; *tatau*, to tie; *taunga*, a support, bond, tie, a bond of connection between families; *taumau*, betrothed. Tahiti: *tau*, an anchor; *taura*, a rope; *tauri*, to be intermixed as a family in a house; *tautea*, to rescue, to deliver. Rarotonga: *taura*, a rope. Marquesas: *tau*, a rope; *katau*, *atau*, an anchor. Mangareva: *tauri*, to tie together; *toura*, a cord. Hawaii: *kau*, to tie on; *kaula*, a rope; *kaupili*, to unite, as man and wife.

Sesake: *matau*, an anchor. Mota: *taur*, to hold.

Arabic: *ṣabara*, *ṣabr'*, to bind, to be bound to.

The Proto-Samoan stem is **taul**.

The Polynesian *tau* is protean in its shifts of meaning. I have here segregated only such as are associable with Efaté *tauri*. Other senses will be found in 236 and 267.

In the Melanesian identifications Mota is satisfactory. We lack the data to establish the value of *ma* in Sesake *matau* which seems to be a composite of this *tau*.

163.

telatela, matulu, mutultul, matoltol, large, swollen.

Samoa: *tele, latele, vatele*, large. Mangareva: *tere*, to be fat, to swell out. Maori: *tetere*, large, swollen. Hawaii: *kelekele*, fat, plump, large.

Samoa: *matolutolu, matoutou*, thick (of pork only). Tonga, Futuna, Nukuoro: *matolutolu*, thick. Niuē: *matolu*, id. Uvea: *matolu*, thickness. Hawaii: *makolu*, wide, thick. Maori: *matotoru*, thick. Fotuna, Tahiti: *matoru*, id. Mangareva: *matoru*, fat, thick. Marquesas: *motou*, thickness.

Mota: *matoltol*, thick. Epi: *toru*, large. Norbarbar: *motoltol*, thick. Nguna: *matulu*, id. Baki: *mererolu*, id. Malekula: *metetir*, id.

Hebrew: *'adīr*, large, great.

Dr. Macdonald includes in his identifications Samoa *telatela*, which, if valid, would avail to connect the two groups which follow. Unfortunately this identification is form resemblance only, for *telatela* in Samoan is the clitoris and in no way associable with the signification of these stems. Yet without this there is abundant reason to consider *matolu* a conditional derivative of *tele*. If this be the fact, the conditional, which remains practically uniform, must be held to preserve a primitive which since then, in its unsupported state, has developed other vowels.

In the Melanesian identifications all is plain except Baki and Malekula. They seem to have *me* as the conditional element. The primitive, then, will appear in Baki as *rerolu* and in Malekula as *tetir*, evidently reduplications. In view of the plural preduplication of Samoa *tele tetele* Malekula *tetir* seems explicable in form and interesting as exhibiting the much desired transition form between *tele* and *matolu*. Baki *rerolu*, apart from the irregularity of vowel change in duplication, would argue a *t-r* mutation. This is unusual but not impossible. These data afford four examples, which are here presented for consideration: *futi* (329) banana Moānus *mbūr*; *ate* (276) liver Malekula *ere* Efaté *are*; *jatu* (294) a stone Malekula *var*; *talinga* (350) ear Malekula *riring*. The last I withdraw for reasons which will be offered sub voce. The Baki form may pass.

164.

tere, teretere, (a) the comb of a cock; (b) the eaves of a house.

(a) Samoa: *tala*, a thorn, the barb of a spear, the spur of a cock; *talatala*, prickly, thorny, rough. Tonga: *tala*, a thorn, the pricking fin on the back of a fish; *talatala, tala*, thorny, prickly. Futuna: *tala*, thorn, horn of an animal, fin of a fish; *talatala*, prickly, thorny. Niuē: *talatala*, prickly. Uvea: *tala*, thorn, horn; *talatala*, prickly. Nuguria, Nukuoro: *tara*, a thorn. Maori: *tara*, a point, as a spear point, spines in the dorsal fin of a fish, membrum virile, clitoris; *taratara*, a spine, spike, prickly, rough. Tahiti: *tara*, a horn, thorn, cock's spur; *taratara*, prickly, thorny. Rapanui: *tara*, a horn, spine, thorn. Hawaii: *kakala*, rough with sharp points; *kalakala*, thorny. Mangareva:

tara, a horn, a spine, crest of a bird; *taratara*, prickly, thorny, spiny. Moriori: *hokotara*, to sharpen. Marquesas: *taa*, a thorn, spike, point.

- (b) Samoa: *tala*, the round ends of a house. Maori: *tara*, the side wall of a house. Tahiti: *tara*, the corner or end of a house; *fautarafare*, the bend of the round part of a house. Hawaii: *kala*, the ends of a house in distinction from the sides.

Viti: *teretere*, combs of some birds, crest of serpents.

Duke of York: *tālaglagano*, thorny.

Arabic: *torra*, crest, comb of a bird; *torrat*, extremity, end of anything.

There is no reason to suspect any closer association between these two groups than is involved in identity of spelling, which, despite change of vowel in Polynesian, extends to their last occurrence. The Viti carries the Efaté vowel scheme within the borders of Nuclear Polynesia and serves as the connective for the thorn sense.

In the architectural *tala*, Samoa, Tahiti and Hawaii agree upon the ends of the house, Samoa and Tahiti upon their being curvilinear; with a different plan of structure the Maori assign it to the side wall. Of the Efaté word the most that can be said is that it is architectural even if widely different from any Polynesian use.

The only Melanesian resemblance beyond Efaté, Duke of York *tālaglagano*, in the east gate of Indonesia, suggests a stem *talak*, of which no trace survives elsewhere and the gap in Melanesia precludes confirmation.

165.

tere, the mast of a ship, calf (column) of the leg.

Samoa: *tila*, the sprit of a sail. Futuna: *tila*, the long boom or sprit to which a sail is bent. Tonga: *jila*, yard of a canoe.

Fotuna: *jira*, mast. Maori: *tira*, mast of a canoe. Tahiti, Rarotonga, Mangareva: *tira*, a mast. Uvea: *sila*, yard.

Makura: *na-tire*, mast. Tanna: *tila*, id. Bierian: *n'dalin*, id.

Arabic: *şariyat*, *şari*, the mast of a ship, a column.

In devising his second definition Dr. Macdonald has squinted so strabismically at his Arabian entertainment that a single degree added to his angle of vision would have turned him into a One-Eyed Calender.

In the Polynesian group the *t-s* mutation in Uvea *sila* is sufficiently common.

The Melanesian identifications are simple, except Bierian *n'dalin*. Omitting the final *n*, for which we have no explanation other than that it may be noun-formative, we may reduce the word to *tali*, and this, it is at once apparent, is metathetic for *tila*.

The variety of sense as between boom, sprit, yard, and mast is more apparent than real. It is due to an attempt to establish as a fixed concrete a term which is undoubtedly abstract and descriptive. In the navigation where the triangular sail has an enormous sprit or boom and a short mast *tila* goes with the longer spar; where the mast is high and the sprit, boom, yard or gaff is subordinate, *tila* still goes with the longer spar. If we had the data whereby to analyze *tila* down to its elements we should probably find that it meant no more than long spar.

tifai, thunder, **ti**, article, and **fai**.

The following words all mean thunder and those in which the **fai** element is indisputable are grouped:

Samoa, Fakaafu: *faititili*. Tonga: *faijijili*. Manahiki: *faititiri*.
 Tahiti: *patiri*. Tongarewa: *hatitiri*. Maori: *whatitiri*,
whaitiri. Bukabuka: *watitiri*. Paumotu: *fatitiri*. Nukuoro:
haturi. Rapanui, Mangareva: *atutiri*. Hawaii: *hekili*.
 Nuguria: *hetuturi*. Marquesas: *hatitii*, *fatutii*, *hatutii*.
 Aniwa, Fila: *te-fachiri*. Fotuna: *vajiri*. Vaté: *vatshiri*.
 (Malay: *titir*, to make a noise, a noise which gives alarm.)
 Arabic: *bahh'*, hoarse, used of thunder.

Dr. Macdonald's simple attempt at etymology in respect of his designation of *ti* as article must have reference to the Tongafiti *te*, the weak demonstrative functioning as article at times, for his dictionary does not identify *ti* in Efaté in any sense. The common Polynesian words for thunder involve the two elements *fai* and *tili*. The Efaté alone in Melanesia contains elements in the thunder word which resemble the Polynesian. As to the *fai* there can be no doubt; *ti* may readily be an abraded form of *tili*. I know of no instance in which the Melanesian has inverted the order of the elements in borrowing a Polynesian composite, yet in default of more definite information this seems not unlikely in this case.

The former element in Polynesia has the following forms:

fai : Samoa, Fakaafu, Tonga, Manahiki.	wa : Bukabuka.
whai : Maori.	wha : Maori.
fa : Paumotu, Aniwa, Fila, Marquesas.	ha : Tongarewa, Nukuoro, Marquesas.
va : Fotuna, Vaté.	he : Hawaii.
pa : Tahiti.	a : Mangareva.

The latter element falls into groups, which yet may not have diagnostic significance, according to the duplication of the stem, as follow:

tili: Tahiti, Maori, Hawaii, Aniwa, Fila, Fotuna, Vaté (Nukuoro).
titili: Samoa, Fakaafu, Tonga, Manahiki, Tongarewa, Maori, Bukabuka, Paumotu (Mangareva, Rapanui).
tilitili: Marquesas.

Mangareva *atutiri*, Marquesas *fatutii*, *hatutii*, suggest a *fatu* former element. Yet the Nukuoro *haturi*, which can scarcely be *hatu-ri*, seems to argue a remoter *tutiri* duplication through an ignorance of the stem vowel which Nukuoro reveals. The first of the three Marquesas forms is recorded by Tregear, but is not found in Bishop Dordillon's modern dictionary.

If we had none other than the *fai*-composites we should say that the former element signifies "to make." Not one of the other forms of this element offers in any of the languages a sense which might explain the composite, but not one of the languages has anything which would contra-indicate this sense. Provisionally, therefore, we may assume that *faititili* means "to make-*tili* intensively."

Nowhere in Polynesia can I find a meaning of *tili* which would shed any light on this composite, and I am forced to the conclusion that this element has passed out of independent existence. The presence of the composite in Aniwa, Fotuna, and Fila argues its great age as a compound. I am very loth to accept an Indonesian identification except it be supported by a satisfactory chain of evidence. To present such a resemblance based upon a single instance goes against my practice in the present work. Yet with this deprecation I note the Macassar *djili* the lightning flash. *Faitili* then might mean that which makes the lightning. It may be that we shall find a trifle in geographical support of this suggestion. Macassar is the region in Celebes which lies in closest proximity to the island of Salayer, a name which seems not remotely preserved in the honorific *ja'alupenga* of Samoa in the high phrase for all Tutuila.

Tulouna a 'oe le motu o Salaia. Saving thy grace, island of Salaia.

167.

ulumwa, a pillow for the head.

Samoa: *alunga*, *alulunga*, a soft pillow. Nuguria: *aruna*, headrest. Tonga: *olunga*, pillow. Futuna, Uvea, Niuē: *ulunga*, id. Maori, Mangareva: *urunga*, id. Hawaii: *uluna*, a pillow, to sleep on a pillow, to tie up a bundle for a pillow. Paumotu: *rurunga*, a pillow. Tahiti: *urua*, *turua*, id. Rapanui: *rangua*, id. Dufaure Island (New Guinea): *unua*, a pillow. New Britain: *ululalag*, id. Mota Maligo: *ilinga*, head-rest, pillow. Mota Veverau: *ulunga*, id.

Mahri: *here*, *haroh*, *hare*, *eres'*, the head.

Dr. Macdonald repeats and again repeats the hint that this is a derivative of *ulu* the head. Tregear notes that the word is probably connected with *uru* the head, *turu*, and *runga*.

This can only apply in those instances which have initial *u*, Futuna, Uvea, Niuē, Maori, Mangareva, Hawaii, Tahiti, Mota Veverau. It leaves unsatisfied Samoa, Tonga, Paumotu and Mota Maligo. The Samoan plural is proof that the word is a composite of which the latter element is *lunga*. The former element is most commonly *u*, but *a*, *o*, and possibly *i* occur. The Paumotu *rurunga* is accordingly a preduplication of the second element and the common first element does not appear in it at all. If, then, *lunga* independently or in composition carries the sense of headrest it will be seen that the stem can not be *ulu* the head. The alternative Tahiti *turua* is anomalous on either theory of the word. The Rapanui form is susceptible of explanation by double metathesis.

Mota Veverau *ulunga* is of the general type. I incline to regard Mota Maligo *ilinga* as a mere variant of local dialect. The only way by which Dufaure *unua* can be brought into correlation is by establishing the loss of *n* and the *l-n* mutation. Each of these changes is abundantly manifested in Melanesia and Polynesia; whether they are current in Dufaure Island the only other word we have from that speech (*ama* (340) outrigger Dufaure *sarima*—unsatisfactory) does not allow us to judge. The New Britain *ululalag* can be correlated only as a compound of *ulu* head and *lalag* equivalent to *lunga* with reduplication, and there is no evidence forthcoming to support the latter, while the former is distinctly contraindicated.

utu, ut i, to fill (by immersing) a water vessel.

Samoa: *utu*, to draw water, to fill a bottle, to charge a gun. Tonga: *utu*, to draw water; *utufia*, to pour out, to run as water from a vessel or tears from the eyes. Futuna: *ùtu*, to draw water, to fill with a liquid; *uku*, to plunge into the water. Uvea: *utu*, *uutu*, to draw water, to pour into. Niuē: *utu*, to draw water. Nuguria: *utu*, to fill. Maori: *utu*, to dip up water, to fill with water. Tahiti: *utuhi*, to dip into the water, to rinse. Mangareva: *utuhi*, to draw water. Hawaii: *ukuhi*, to pour, as water into a cask, to fill a vessel with any fluid. Mangaia: *uti*, to draw water. Fotuna: *no-citu*, id. Rapanui: *uutu*, to fill up; *ootu*, to draw water.

Motu: *utu*, a flood, to draw water. Tanna: *atu*, id. Aneityum: *athun wai*, id.

Arabic: “*ata* (“*a'tu*) to immerse.

The Proto-Samoan stem is **utuf**.

Rather more frequently than is the case in general the influence of the radical *f* is found not only in Nuclear Polynesia but persists to distant extensions of the Tongafiti swarm. The Mangaia *uti* is singular in Polynesia but accords with an alternative Efaté form. The irregularity of the initial vowel in Fotuna looks toward the Tanna and Aneityum forms, and they are its close neighbors.

Dr. Macdonald in his definition squints as usual quite obliquely at the Arabic. It is only by the accident of the container, the common water vessel of the South Sea being the coconut pierced at the eyes, that it is more convenient to fill by immersing. That the immersion in no sense inheres in the word is shown by the Samoan use of *utu* to charge a gun or to cram tobacco into a pipe, and by the general use of the word to signify pouring out from the container.

EFATÉ-MELANESIAN-POLYNESIAN-MALAY.

finanga, food.

Samoa: *sina'aiunga*, grayheaded from eating the hermit crab (*unga*), old but foolish. Tonga: *hinakaiunga*, grayheaded as a punishment for eating the hermit crab.

Mota, Marina: *sinaga*, food. Malo: *sinaca*, id. Motlav, Omba: *hinaga*, id. Lo: *hinega*, id. Sesake: *vinaga*, id. Duke of York: *winangan*, id.

Malagasy: *hinana*, food.

There is a possibility that the Efaté contains a misprint, for in Dr. Macdonald's alphabet the *ng* differs from the *g* by no more than a dot above. The mutation *g-ng* is by no means impossible, but it is strange that Efaté is the only speech except the distant Duke of York in which this word varies from the standard.

The two words in Nuclear Polynesia have hitherto been a puzzle unsolved. The interpretations offered in the dictionaries of Pratt and Baker respec-

tively are just such philology as the islanders invent for the student who attempts to go under the surface of their speech. It is of a piece with the Samoan etymology of *tangata* man from *ta* to strike and *ngata* snake, with Genesis iii, 15, cited as decisive. We now reduce the word to *sinaka* food in a verbal use as shown by verb-formative *i*, and *unga*, the particular sense of which does not yet appear.

The Melanesian forms are all in accord, even including Duke of York *winangan*, for in this island we find *s-w* mutation although no other example thereof is included in these data; and the Sesake *vinaga* is transitional.

EFATE-POLYNESIAN-MALAY-SEMITIC.

170.

afis i, afit i, afin i, afan i, afen i, to put or carry under the arm or arms held between the arm and the side, to cover with the wings as a bird its young, clasping them between the wing and the side; **afini na**, the armpit; **afili na**, the armpit, the groin.

Samoa: *afisi*, to carry under the arm, to carry a child astride the hip, *afisinga*, a load carried under the arm. Tonga: *efi*, to carry under the arm. Futuna: *efi*, to carry under the arm, the under side of a fin. Mangareva: *ahi*, when used after a word signifying a load or a bundle it means a load carried on the chest or in the arms. Maori: *awhi*, to embrace; *awhe*, to measure a tree by embracing it. Tahiti: *ee*, armpit.

Malay: *kâpet*, *mângâpet*, to carry under the arm.

Arabic: "*abana*, to put under the armpit; *ma'bin'*, groin, armpit.

The Proto-Samoan stem is **afis**.

This appears only in Samoa and in Efaté, where variants are found in *t*, *n* and *l*. The *efi* of Tonga and Futuna marks the transition in respect of the former vowel, and Maori *awhe* the transition form for the latter; together they substantiate Tahiti *ee*, the *f* normally vanishing in that language.

171.

bangobango, to be crooked.

Samoa: *pi'opi'o*, crooked, wrong. Futuna, Tongarewa, Marquesas, Mangareva, Paumotu: *piko*, bent, crooked, awry, twisted. Nukuoro: *pikopiko*, crooked. Niuē: *piko*, to think erroneously; *pikopiko*, to speak falsely. Uvea: *piko*, *pipiko*, crooked, sluggish. Maori: *piko*, to bend, to stoop, to be curved. Rapanui: *hakupiko*, pliant, to bend, to make crooked. Tonga: *biko*, crooked. Tahiti: *pio*, bent, crooked, wrong. Hawaii: *pio*, bent, crooked.

Malay: *bengkak*, crooked. Malagasy: *vukuka*, id. Java: *bengkong*, id. Saru: *pekak*, id.

Hebrew: *hafak*, to turn. Syriac: *hpak*, id. Arabic: '*apaka*, id. Hebrew: *hapakpak*, crooked, twisted.

172.

bwala, to be smooth.

Samoa, Tonga, Futuna, Niuē, Uvea: *molemole*, smooth. Nukuoro: *molemole*, soft. Hawaii: *molemole*, smooth, bald. Tahiti: *moremore*, id. Maori: *more*, bare, plain, bald. Mangareva: *akamore*, to decapitate, to cut off horns. Paumotu: *moremore*, without hair on the body, polished.

Malagasy: *bory*, deprived of, shorn, cropped, polled.

Arabic: *māra*, *maur'*, to fall off or pluck out, as wool or hair.

173.

biau, **beau**, **biaufiau**, **biafiau**, a wave; **biaufiau**, to be raised in waves, rough sea.

Samoa, Tonga, Futuna, Fotuna, Niuē, Marquesas, Nuguria: *peau*, a wave. Mangareva: *peau*, *peahu*, id.

Viti: *mbiau*, a wave.

Tanna: *peau*, a wave. Aneityum: *ne-peau*, id.

Malay: *ombak*, a wave.

Ethiopic: *ababi*, waves. Arabic: *'ubāb*, id.

174.

bule, **fule**, complete (adverbial).

Tonga: *fuli*, *fulibe*, all, everyone. Futuna: *fuli*, all, universal; *fuliai*, all without exception. Uvea: *fuli*, all, universal, the whole.

Malay: *bulah*, the whole.

Arabic: *bala'a*, *bulū'*, to complete, to go through to the end.

175.

busī, to blow, to spout as a whale.

Samoa: *pusa*, to send up a smoke (applied also to dust, spray, vapor), Nukuoro: *pusa*, steam. Fotuna: *noh-pusa*, to rise (of dust). Tonga: *buhi*, to spit; *bubuhi*, to spout as the whale, to blow anything from the mouth. Futuna: *pupusi*, to blow, a blast of wind. Niuē: *puhi*, to spurt out. Uvea: *pupuhi*, to blow. Maori: *puhi*, to blow. Tahiti: *pupuhi*, to blow the fire, to blow out a candle; *puhipuhi*, to blow with the mouth, with a fan, with bellows. Hawaii: *puhi*, to blow (as wind), to blow (the fire, a shell), to puff, to spout. Marquesas: *puhi*, to blow, to breathe. Mangareva: *puhi*, to blow. Paumotu: *puhipuhi*, to blow. Rarotonga: *pupui*, id.

Malay: *âmbus*, *âmbusi*, to blow; *âmbusan*, bellows. Malagasy: *mifufutra*, to blow the bellows.

Arabic: *nafat'a*, *nafah'a*, to blow out, to puff, to eject spittle.

I do not take cordially to Dr. Macdonald's inclusion of Samoan *pusa* in his identification. This word is found also in Nukuoro and Fotuna and nowhere else in Polynesia. The accord of all other instances upon *pusi*, evidently *pūs* advanced in manufacture by the verb-formative *i*, renders it well-nigh impossible that this rare and rigidly Proto-Samoan *pusa* can be associable therewith. The only difference between the two *pusi* senses is that to spout is blowing made visible; this sense in Polynesia appears in Tonga, Niuē, and Hawaii.

176.

butu, futu, butafuta, futfut, to spring up or out, as water from a spring or smoke from a fire; **butu-raki, buti-raki**, to appear, to come in sight.

Maori: *puta*, to gush out, to spurt, to come in sight, to pass through, to pass in or out. Hawaii: *puka*, to enter in or pass out; *hoopuka*, to appear in sight when at a distance. Marquesas: *puta*, to arrive. Mangareva: *puta*, to go out from.

Malay: *târbit*, to issue, to come out, to emanate, to appear.

Arabic: *nabata*, to spring up or out as water, to appear, to go or come forth, to come in sight.

If it were not that the Maori and Hawaiian comprehend the two senses in one word I should scarcely consider *buta* and *buturaki* associable. The latter, despite our author's division of the word by the hyphen, seems to be *butur-aki, butir-aki*, in which the *ki* which he describes as transitive particle seems better comprehended as *aki* which is verb-formative all through Polynesia. In this case the stem is closed with a liquid. The absence of this closing radical and the difference of vowel in *buta* argue against its association with the *butur* stem. The Polynesian forms preserve the *a* and therefore have a formal identification with *buta*, but in the sense there is a mixture with significations of *butur*. It will be observed that this is one of the infrequent identifications with the Tongafiti swarm having no trace in Nuclear Polynesia; therefore it should not be accepted without a clearing up of these difficulties far beyond our present power.

The *buturaki, butiraki*, sense is found in Nuclear Polynesia in Samoa *fotu*, Tonga *fotu, fotui, fotuaki*, Futuna *fotu*, Viti *votu*, all of identical meaning. Yet there is nowhere any trace of the radical final consonant. The Tonga *fotuaki* would appear to negative the possibility that modern *fotu* stems in *fotur*, but this is more apparent than real, for Tonga seems not to have adopted these inflected forms until the final consonants of closed roots had vanished. In Samoa, where closed roots are normally preserved in composite (inflectional) forms, we have no record of any form which might give evidence upon this point. Accordingly this is not offered as an identification, but to record a resemblance sufficient to suggest identity. It is to note that Samoan *fotu* could not undergo any known variation and become Maori *puta*.

177.

ngal i, kal i, al i, to stir water around.

Samoa, Tonga, Futuna: *ngalu*, a wave, a breaker. Fotuna, Maori, Rarotonga: *ngaru*, id. Mangareva: *ngaru*, scum, froth. Paumotu: *puhingaru*, a bubble of water. Hawaii: *nalu*, a wave. Tahiti: *aru*, id. Marquesas, *kaú, naú tai*, id.

Malay: *alun*, a wave. Malagasy: *aluna*, id.

Hebrew: *galal*, to roll; *gal*, fountain, well, waves. Syriac: *galo'*, a wave.

In addition to the identification with *ngalu* Dr. Macdonald, led by abraded forms of his *ngal*, adds the Hawaiian *ale* to well up, which is negligible. Both he and Tregear link with *ngalu* a wave *ngalue* to shake. In this case

the *nga* is a formative prefix, and the stem *lue* has already been studied under 159.

The identification *ngali-ngalu* satisfies in form as little as in sense. In the Polynesian the word has a distinct and concrete meaning. The Efaté, if it be regarded as concrete, means something quite different from *ngalu*; and if it be regarded as a loose and abstract term it has nothing in it to suggest a wave of the sea. Furthermore we find in these data almost no instance in which we are satisfied with the identification of a Polynesian concrete with a Melanesian abstract.

178.

ngiringiri, bright, shining, brilliant, polished.

Samoa: '*i'ila*, to shine, to glisten, to glitter. Tonga: *kikila*, to shine, to glare; *ngingila*, bright, shining. Futuna: *kikila*, bright, shining; *ngingila*, brilliant, resplendent. Niuē: *kikila*, brightness, to shine. Uvea: *ngingila*, bright, shining, brilliant, fiery, to beam; *pakila*, a ray, a beam.

Malay: *gilang*, to shine, to glitter, to dazzle, bright, brilliant.

Arabic: *gala'*, *galiyy'*, clear, bright, shining, polished.

The concurrence of *ng* and *k* forms in Tonga, Futuna and Uvea, while Samoa and Niuē have but the *k* form, seems to point to two channels by which the word reached these several parts of Nuclear Polynesia. Of these the migration which reached Samoa-Niuē seems to present an earlier stage of the root, if the Malay identification prove to be as good as it seems. Then Efaté-Uvea-Futuna-Tonga are finger-posts of a later migration overlaid upon the earlier. We shall again and again notice evidences of two waves in the Proto-Samoan migration stream. The consociation of Samoa and Niuē is supportable by Niuē tradition.

179.

kabwe, a small basket.

Samoa: '*apu*, a cup or dish made of a leaf. Tonga: *kabu*, the banana leaf so folded as to hold water; *habu*, the banana leaf tied at both ends to hold water. Mangareva: *kapu*, a cup, a leaf dish. Rarotonga: *kapu*, a cup. Marquesas: *kapu*, a handful; curved, rounded. Tahiti: *apu*, the shell of a nut or gourd. Hawaii: *apu*, a dish or cup; *aapu*, a concave vessel. All the Polynesian words are associated with the curving hollow of the hand, Maori: *kapu*, id.

Malay: *kabok*, goblet. Malagasy: *kapoaka*, a cup, a goblet.

Syriac: *kapo'*, a goblet. Hebrew: *kaf*, *kap*, the hollow of the hand; plural a hollow vessel, pan or bowl; *kafaf*, to bend, to curve. Cf. *kaf* 96.

180.

las, lasi, big, large, great, sufficient, to suffice.

Samoa: *lasi*, many. Futuna: *lasi*, many, great. Tonga: *lahi*, large, many, abundant. Niuē: *lahi*, great. Uvea: *lahi*, many, great. Maori, Tahiti: *rahi*, many, great. Manahiki: *rahi*, great. Rarotonga: *rai*, large.

Saparua: *ilahil*, great. Awaiya: *ilāhe*, id.

Arabic: '*arus'a*, to be wide, large.

There should be a limit to the confidence with which we are to follow our author. Our limit is reached at this word "suffice." For it is thus that Dr. Macdonald proceeds: "to meet, i. e., to suffice, be sufficient for, as *nafinanga i lasingila*, the ford is sufficient for (meets) us and you, *tilasi*, id., also to meet, come upon, come across (a person) *i tilasinami nabua*, he met us—them on the way."

So far as *las*, *lasi*, means great the Polynesian identification is perfect.

The Indonesian suggestions are derived from Turner; they are presented as resemblances; there seems no other relation.

181.

soko, masoko, true, exact, to the point.

Samoa: *sa'o*, *sāsa'o*, correct, right. Futuna: *sako*, right, correct.

Tonga: *sao*, pleasing, agreeing with what is right and just.

Niuē: *hako*, straight; *hakohako*, perfect, upright, just.

Malay: *sung'uh*, true.

Arabic: *ṣadaqa*, *sadq'*, true. Hebrew: *ṣadaq*, to be straight, right, just.

The extinction in Tongan of Proto-Samoan *k* is so unusual as to cause the thought that perhaps Tonga *sao* is really Samoa *sao* perfect, without fault or blemish, and not properly to be identified with *sako*.

182.

sulu, a torch; **sulu ē**, to scorch with the flame, to illuminate with a torch.

Samoa: *sulu*, a torch; to light by a torch; *sulusulu*, to carry a torch; *susulu*, to shine (used of the heavenly bodies and of fire). Futuna: *susulu*, the brightness of the moon. Tonga:

huluaki, *huluia*, *huluhulu*, to light, to enlighten; *jakahuhulu*, to shine; *tuhulu*, a torch or flambeau, to light with a torch.

Niuē: *hulu*, a torch; *huhulu*, to shine (as the moon). Maori: *huru*, the glow of the sun before rising, the glow of fire.

Baki: *yulu*, a torch. Motu: *hururu*, id.

Java: *suluh*, a torch.

Arabic: *s'a'ala*, to light, kindle a fire, torch; *s'u'ulu*, flame of fire; *mas'al*, torch.

The Efaté gives us the torch sense; this runs through Samoa, Tonga, Niuē, Baki, Motu, Java. In Polynesia we encounter the sense of shining, which may be taken to mean that the torch is the shining thing. The abstract sense is found with the torch name conjointly in Samoa, Tonga and Niuē, and exclusive of the torch in Futuna and Maori. The Samoan *susulu*, which expressly points out that fire and the heavenly bodies shine in the same word, is the link which joins the two significations, and the Maori would be exactly as valid if it but included a *sulu* torch. The celestial shining in Samoa and Tonga is general, in Niuē and Futuna is moonshine, in Maori is the sun in the dawn glow. Of the Paumotu *huru* color, height, figure, shape, only the first sense can be in the least referable to *sulu* to shine, and then only to dismiss it.

The Motu identification will pass muster. If the Baki is to stand it introduces a new mutation, *s-y*, one which rests upon this single instance;

and our Baki material is so scanty, this being the only case involving *s*, that we can neither prove nor dispute it.

The Java *suluh* seems good, for in cases where form and sense are in perfect accord we need not exact corroboration from other Indonesian sources.

183.

tabwa n, tauba na, side, shore.

Samoa: *tafa*, the uncolored border of a bast cloth. Tonga: *tafa*, the border or edge of bast cloth or of anything; *kapa*, the corners and edges of anything. Niuē: *tafa*, side. Rapanui: *tafa*, edge, border, fringe, cloth, clothing. Maori: *tafa*, the margin, the edge, the brim of a vessel. Mangareva: *tafa*, bast cloth, the border of cloth. Marquesas: *tafa*, bast cloth. Tahiti: *tape*, a fragment of cloth; *tapemoana*, the edge of the deep water. Hawaii: *kapa*, bast cloth, bank, shore, side.

Malay: *tapi*, edge, border.

Arabic: *taff*’, side, shore.

The sense of side, without particular restriction, is found in Efaté, Niuē, Maori. The specialized sense of the border of the bast cloth, which is absent from Efaté, is found to the exclusion of the general sense in Samoa and Mangareva, and inclusive of the general sense in Tonga. In Mangareva the word means not only the border but the cloth, and in the Marquesas and Hawaii the border idea has vanished and the word is applied to the cloth in general, while in Tahiti it designates any fragment of the cloth. The shore sense takes a long leap from Efaté to Tahiti and Hawaii.

184.

tāu-ni, tāō-ni, to cook, to bake in the oven; **tāō**, leaves for cooking which are put into the oven along with the food to be cooked.

Samoa: *tao*, to bake; *taofono*, *taona’i*, to bake food the day before it is used; *tau*, the leaves used to cover an oven. Tonga: *tao*, to cook food in an oven, to bake. Futuna: *taò*, to put in an oven, to cook. Niuē: *tao*, to bake. Uvea: *tao*, to cook, to bake. Maori, Rapanui: *tao*, to bake or cook in a native oven, properly to steam, to boil with steam. Tahiti: *tao*, the rocks and leaves with which a pig is covered when cooking; baked, boiled, cooked. Marquesas, Mangareva, Mangaia, Tongarewa: *tao*, to bake in an oven.

Malagasy: *tatao*, the rice, milk, and honey cooked at the annual feast.

Arabic: *taha*, *tahw*’, to cook.

The Proto-Samoan stem is **taon**.

The word refers to the specific manner of cookery which involves the pit oven. The suggestion in the Maori, therefore, does not mean a different method; it is but an attempt more precisely to describe the kitchen method, a very tasty cookery, be it said. The suggestion of boiling is found only in Tahiti, yet in his dictionary Bishop Jaussen does not record it under the word *bouillir*; boiling was little known to the Polynesians before the European introduction of pottery and other fire-resisting utensils. The

sense of the noun *tāō* is found in Tahiti, and in Samoa where it is distinguished from the verb by the form *tau*, and this corresponds to *tāüni*, which nowhere else appears in Polynesia.

The Malagasy affiliation is suggested by Tregear with the apologetic note cf. It does not seem good, for rice and milk with honey scarcely lend themselves to this cookery. The failure to recognize Polynesian kitchen conditions in regard of rice once mislaid some charity of excellent intention. The Apia hurricane of 1889, in addition to the destruction of two fleets, left the Samoans on the verge of starvation by the uprooting of their plantations and the snapping off of the crowns of coconut trees. As soon as their plight became known in Australia the warm-hearted Colonials despatched a cargo of rice to keep the poor islanders alive. Unfortunately the Samoans had neither stoves nor pots, they could not bake rice in a pit oven, and they were as badly off as ever until food supplies better adapted to their conditions reached them.

185.

uta na, uta i, to pay for, repay, give in payment for.

Niuē: *uta*, to pay, to render. Maori: *utu*, an equivalent, a recompense, the price paid, to pay for, to compensate. Marquesas: *utu*, wages. Tahiti: *utua*, compensation, reward, wages.

Hawaii: *uku*, to pay, to remunerate, wages.

Malay: *utang*, a debt. Tagalog, Visayas: *utang*, id.

Arabic: 'ada', to pay for, repay.

The Niuē identification is a satisfactory showing that the word has made an entrance into Nuclear Polynesia. The *utu* forms are all in the Tongafiti migration, and that is so much later as to have allowed the word to change, or it may have been a dialectic variant *ab initio*. These words are in accord among themselves and vary from Efaté only in form and that upon the weak point of the unaccented final vowel. They are, therefore, acceptable.

The Malayan identifications are imperfectly satisfactory. Polynesia has the sense of something that is paid to a person who has the right to receive it; Indonesia has the sense of what a person has to pay out. The distinction is one that would have found Wilkins Micawber, Esq., at his best, to the rest of us a tragedy. Yet in form the Indonesian words agree in a terminal consonant, which is also in Efaté *utana*, if I am correct in thus reading the word.

EFATE-VITI-MELANESIAN-POLYNESIAN-SEMITIC.

186.

āfa, afāfa, ofa, ofaofa, to swim.

Samoa, Futuna: *opeope*, to float.

Viti: *nawa*, to float.

Epi: *mava, mia*, to swim.

Arabic: 'āma, to float, to swim (said of a man), to go (of a camel), to dispose in sheaves or bundles; 'amat, a bundle, float or raft for carrying things across water.

If the following were but an exercise of Dr. Macdonald's reasoning I should have left it in his volume where the curious might find it, yet on

account of what seems a definite and positive ascription to a "native" I must give it place:

The first meaning (to swim) seems not connected with the second (to carry), to a European, but a native connects them thus: a man *afa natas*, swims or floats on the sea, the sea *afa natamole* bears or carries the man; so a man *afa ki nakasu*, swims holding a floating stick, but if he gets on to the stick and lets it float him ashore the stick is said to *afa i* carry him. The sea or the stick carries him thus, hence *afa*, v. t., denotes carry a man on one's back, then to carry anything on the back: and as a man so carried clasps with his arms the carrier round the chest, the head of an axe is said to *afa* its handle, and as one carrying a basket on his back holds the string of it over his shoulder, so a man drawing a log by a string thus over his shoulder is said to *afa* it, and a tug steamer is said to *afa* or tow a ship. A dog *afa* a piece of meat, carrying it off firmly held by its teeth, and a man *afa* a pipe or a twig, i. e., carries it held by his teeth. A messenger *afa*, carries his message, a horse its rider, and a warrior *afa*, carries, i. e., leads his troop; also a person *afa narongitesan*, bears a disease or infirmity or trouble. In the Arabic word there is the idea of connection together (as things in a bundle). In *afai*, carry him as a floating stick carries a man in the water, or a horse carries him on land, the transitive preposition *i* gives the verb its transitive force, make to swim, to go, i. e., carry.

This identification seems very doubtful at every point. In the matter of signification, floating is by the islanders quite distinguished from swimming. Through *ofa* the Efaté *āfa* approximates *ope* in form, but the sense difficulty remains. Efaté and Samoa are the forms which lack an initial consonant. Between Viti and Epi there is sense dissimilarity, but there is a certain formal resemblance except for the initial consonant. It might be argued that the fact that there is such dissimilarity shows that this consonant is in a state of flux and therefore the more readily tends to vanish. The mutation is not recognized in any of our Epi material. Regarded as *n-m* mutation, we have but three instances of its occurrence in our data, and that no nearer than Marina (312-3, 317, 324). If regarded as *m-n* mutation, our only support will lie in the equally distant Nggao and New Georgia in the single word 351.

The Semitic requires all Dr. Macdonald's reasoning above cited, and even then wholly fails of giving satisfaction.

187.

arān, orān, arain, oraone, on, uen (in **on** and **uen** the radical **r** is changed to **n**), sand.

Samoa, Fakaafu, Tonga, Futuna, Niuē, Uvea, Nukuoro, Aniwa, Fotuna, Maori, Tahiti, Hawaii, Rarotonga, Manahiki, Marquesas: *one, oneone*, sand. Nuguria: *one*, sand; *oneone*, beach. Mangareva: *one*, the soil; *onepatapata*, sand. Rapanui: *oone*, sand, gravel, clay, dirt, filth. Vaté: *ngone*, sand.

Viti: *Oneata*, the name of an island.

Mota, Santo, Malo, Keapara, Galoma, Saa: *one*, sand. Leon: *leon*, on the sand. Baki: *iono*, sand. Bierian: *eniono*, id. Santo Wulua: *parono*, id. Malekula: *dambanaun*, id. Motu, Sinau-goro, Hula, Rubi: *kone*, id. Kiriwina: *kana-kenua*. Boniki: *gonugonu*. Oiun: *ganas*.

Arabic: *horr'*, *horron*, sand; from *harra*, to be hot.

Through inability to use his critical apparatus Dr. Macdonald has solved his quite unnecessary difficulty by his note as to the change of radical *r-n*. A different arrangement of the Efaté material will develop the true radical

quite simply, *on*, *uen* for the simple stem; *oraone*, *arain*, *aran*, *oran* for the composite. The stem is *one* and the Viti, Polynesian, and much of the Melanesian identification is exact.

The form *oraone* shows that *one* is compounded with an element *ora*, and this may be the same as *ara*. In these compounds the *one* member through *in* is degraded into a mere *n*. This *ora* or *ara* may have somewhat to do with the *per* of Santo Wulua *perono*. When unsupported *one* loses its final vowel in *on*, and in *uen* seems to undergo such vowel shift as is found in *arain*.

In Melanesia, so far as is not included in the general identification, we find the loss of the final vowel in *le-on*, and probably in Malekula *dambana-un* we have the same loss together with vowel shift. The form *ono* is found in composites in Baki and Bierian and in Santo Wulua.

Having thus removed the *ara* from the Efáté words there is left to the Arabic identification not even a resemblance.

188.

āso, to burn, to be scorched.

Samoa: 'a'asa, glowing hot. Tonga, Uvea: *kakaha*, hot, fiery, painful. Futuna: *kakā*, fiery, reddened by fire. Niue: *kakā*, hot, red-hot.

Viti: *nggesa*, burnt or scorched in cooking.

Aneityum: *acas*, *cas*, to burn, hot, burning; *ecescas*, burnt.

Arabic: *wakada*, to burn, to be kindled. Hebrew: *yakad*, id.

Syriac: *ikad*, id.

The Proto-Samoan stem is **kas**.

The vanishing of radical *k* in Efáté finds support in *mataku* (258) to fear Efáté *mitaku*, where also we have *mitau*. This granted we have an excellent identification in sense and form from Melanesia through Viti to Nuclear Polynesia. The Niue and Futuna *kakā* are the reduplication of the root after abrasion of its final consonant. One of the Aneityum forms points the way very neatly to the Viti vowel change.

189.

bwalo, to be empty, vain, null and void, to no purpose or effect.

Samoa: *vale*, inactive, needless, worthless. Tonga: *vale*, in vain, in *ukiuki-vale*, to inquire in vain. Hawaii: *wale*, gratuitously, idly, without reward.

Viti: *wale*, uselessly, idly, only, for nothing, gratis.

Mota: *tuwale*, only.

Arabic: *baṭala*, *buṭl'*, *boṭl'*, to no end, in vain, for nothing, idle.

Hebrew: *baṭal*, to be empty, vacant, idle. Ethiopic: *baṭala*, to be empty, vain.

190.

bebe, a butterfly.

Samoa: *pepe*, a butterfly, a moth, to flutter about. Nukuoro, Futuna, Niue, Uvea, Fotuna, Nuguria, Tahiti, Marquesas: *pepe*, a butterfly. Maori: *pepe*, a grub, a moth; *pepepepe*, a butterfly; *pepeatua*, a species of butterfly. Tonga: *bebe*, a butterfly.

Viti: *mbembè*, a butterfly. Rotumā: *pep*, id.

Arag, Ulawa, Saa, Fagani, Bululaha, Hula, Keapara, Galoma: *pepe*, butterfly. Epi: *lepepe*, id. Moanus: *ndrapipi*, id. New Georgia: *pepele*, id. Omba, Maewo, Wango, Vaturanga, Buka, Baravon, New Britain, Solomon Islands, Rubi, Suau, Sariba: *bebe*, id. Laur: *bäbä*, id. Mugula, Tubetube, Tagula, Murua: *bebi*, id. Savo: *bebeula*, id. Motu, Sinaugoro: *kaubebe*, id. Panaieti, Misima: *bebebi*, id. Pokau: *ebebelo*, id. Roro: *peropero*, id. Nada, Kiriwina: *beba*, id. Boniki: *bebabe*, id. Mukawa, Raqa: *arabebemta*, id. Kwagila: *karabibim*, id. Taupota, Wedau: *bebeu*, id. Awalama: *kapeu*, id. Tavara: *gopu*, id. Dobu: *pepega*, id. Mekeo: *jefe*, id. Kiviri, Oiun: *jefek*, id. Lakon, Pak, Sasar, Alo Teqel: *pep*, id. Lo: *pip*, id. Norbarbar: *peb*, id. Volow, Merlav, Gog, Motlav: *beb*, id. Lamassa: *bäm*, id. Lambell: *'hambä*, id. Mota: *pepe*, *rupe*, id. Nggela: *uleulebe*, id. Buka: *bawe*, id. Brierly Island: *bebi*, a moth. Malo: *vebe*, a butterfly. Baki: *bembe*, id. Tanna: *paubauuk*, id.

Morella: *pepeue*, butterfly. Amboyna: *pepeul*, id.

Hebrew: *'up*, *'ib'eb*, to flutter.

The identification is so complete that we need no more than simple inspection until we reach the forms which are either more or less than *pepe*.

The *pep*, by abrasion of the final vowel, finds itself in Rotumä, Lakon, Pak, Sasar, Alo Teqel, Lo, Norbarbar, Volow, Merlav, Gog, Motlav. Still further abrasion, or what amounts to the same thing, the unduplicated stem *pe*, does not, with perhaps a single exception, appear unsupported; but as a composition member it is found in Lambell *'hambä*, Mota *rupe*, and Nggela *uleulebe*. Our possible exception is Lamassa *bäm*. Laur, Lamassa, and Lambell we have through a single channel, very German and the most competent piece of ethnography I know. From this we see that *bä* is close to *be*. In Lambell the *bä* is compounded; in Lamassa, but a few miles away, *bäm* may be regarded as but *bä* nasalized, as is sometimes the Melanesian case; or the *m* may be a mutant from *p*, as we shall discuss in note 207. Variants of *pepe* are easily traced in Malo *vebe*, Baki *bembe*; and Tanna *paubauuk*, while remote from the standard, as Tanna lies remote from the free track of migration, seems struggling to preserve the same stem. In Indonesia the *pepe* stem is unmistakable in Morella and Amboyna.

We now turn to the *pepe* composites. Lambell *'hambä* we have already noted. Not by any means identifiable with *'ham*, but associable because at the northern verge, we note Motu *kaubebi* and Moanus *ndrapipi*. There is a liquid component which so frequently associates itself with *pepe* as to attract notice. Its simplest form is *le*, initial in Epi *lepepe*, final in New Georgia *pepele*. There is a stronger form, yet I incline to regard it identical: *ula* final in Savo *bebeula*, Amboyna *pepeul*, Morella *pepeue*; initial as *ule* in Nggela *uleulebe*. This may appear *in oriori* butterfly in the Lakatoi language.

This consistent reducibility to elemental *pe*, and Buka *bawe* is so reducible as well, removes all possibility of identification with the Hebrew word offered.

We should not pass unnoticed a group of forms which Dr. Ray has collected on the New Guinea shore of Torres Straits. The meaning is wing,

but that is not particularly remote from the butterfly signification. At least the comparison is worth making. Starting with *pepe* and ending with *ani*, these forms show a remarkable process of dilapidation of the Polynesian stem in the custody of Melanesians or worse, yet there is a perfect chain from *pepe* to *ani*. The form *pepe* is found in Mugula, Tube-tube, and Panaieti. The slightly variant *pape* is found in Dobu, Awalama, Taupota, Wedau, and Kubiri; and Tavara *apape* is a modification of the same. The simple, unduplicated stem, *pe*, is recognizable in *mape* of Galavi, Boniki, and Mukawa; in *mabe* of Mugula; and in *peapea* of Sariba. Recurring to the *pape* stem we have no difficulty in following it to Oiun *baben* and Kiviri *jafen*. At this point we have acquired a final *n*, which thenceforward dominates the stem. Its simple series runs in this order: Sinaugoro *pane*, Mekeo *pāni*, Galoma *bane*, Uni *bani*, Keapara *vane*, Pokau *vani*, Motu *hani*, Rubi *ani*. More involved forms are, Misima *openi*, Nada *papane*, Murua *pinpene*, Kiriwina *pinipanela*.

191.

bilikit, to peel.

Samoa: *mele'i*, to husk coconuts.

Viti: *longgata*, to peel: *meleka*, to break off a small piece of food.

Aneityum: *milinga*, to peel.

Ethiopic: *lahasa*, to peel.

The Proto-Samoan stem is **melek**.

We can find this in Samoa, Viti and Aneityum. The Efaté *m-b* mutation we have already been compelled to recognize in *umu* (76) oven Efaté *ubu*. These two instances are very satisfactory, yet there are no other except that similar *m-v* mutation in *masaki* (323) sick Nggela *vahagi*. The Viti *longgata* in which our author sees identity is no more than a partial resemblance.

192.

boro, the coconut leaf; a basket made thereof; the leaf plaited for thatching houses.

Samoa: *pola*, a plaited coconut leaf used to inclose the sides of a house. Tonga: *pola*, the nut leaf plaited for thatch and other purposes; *bolobola*, a large basket made of the nut leaf. Futuna: *pola*, plaited coconut leaves. Niuē: *pola*, a coconut-leaf mat. Maori: *pōra*, a kind of mat. Tahiti: *farepōra*, a small, neatly thatched house on a double canoe; *haapōra*, a sort of long basket. Mangareva: *pōra*, a general name for mats. Paumotu: *kapōrapōra*, a mat. Fotuna: *borabora*, a coconut leaf basket. Marquesas: *pōa*, coconut leaves. Sikayana: *pura*, thatch.

Viti: *mbola*, a coconut leaf plaited for thatching, a basket.

Mota: *pōra*, a basket. New Georgia: *poru*, a mat. Bougainville: *pōlta*, a mat. Aneityum: *naburabura*, a coarse basket.

Arabic: *fara'*, to split, to rend, to slit.

The identification is perfect in our territory, the only variants from the *pola* type being Sikayana *pura* and Aneityum *burabura*, in New Georgia *poru*, and the unaccountable injection of *t* in Bougainville *pōlta*. This, however, may be a syncopation of *polata*, the *pola* screens which serve for Venetian blinds about the islander's house. As usual our author: "*bworai*

to split open; *bora* a basket woven out of the frond of a coconut palm whose stalk is *split asunder*." He is looking not only at *bworai*, but at the Arabic he is about to suggest. The slitting of the stalk would appear to the islander, as to us, the first and least important of the operations whereby the basket is produced.

193.

kafika, the rose apple.

Samoa: *nonufi'afi'a*, the Malay apple. Futuna: *kafika*, a fruit tree.
 Niuē: *kafika*, a lofty tree. Fotuna: *kafika*, the rose apple.
 Tahiti: *ahiā*, Malay apple. Maori: *kahika*, the white pine.
 Marquesas: *kehika*, *kehia*, *ehia*, tree names. Hawaii: *ohia*, a tree name.

Viti: *kavika*, Malay apple.

Mota, Lo, Maewo, Arag, Marina: *gaviga*, the rose apple. Tangoan
 Santo: *kabika*, *khabika*, id. Santo Wulua: *keviga*, id. Malo:
avica, id. Merlav, Lakon: *gavig*, id. Mosin: *gevig*, id.
 Leon: *vegig*, id. Motlav: *na-gveg*, id. Norbarbar: *geve*, id.
 Retan: *vege*, id. Malekula Pangkumu: *havih*, id. Pak:
marag, id. Sasar: *merag*, id. Alo Teqel: *mereg*, id. Tanna:
ni-gauvug, id.

Hebrew: *tapuah*, an apple. Arabic: *toffāh*, id.

The Proto-Samoan is **kafik**.

The modern Samoan has reduced this stem by the initial syllable, but in compensation it has incorporated the name of the custard apple (*Morinda citrifolia*). With mere color justification this *nonu* passes in Samoan over to varieties of the *kafika* (*Eugenia malaccensis*) as *nonuui* the white and *nonu'ula* the red variety. It will, therefore, be not out of place to introduce a brief record of *nonu*, all the more since it is one of the very few words in Polynesia which points at all clearly to a Sanskrit source, *nona* in that language being the custard apple.

nonu: Samoa, Nukuoro, Gilberts, British New Guinea, Tonga, Niuē,
 Futuna, Marquesas (*noú*).

nono: Tahiti, Mangareva.

nino: Mortlocks, Marshalls, Tagalog, Pampangas.

nunu: Viti.

nona: Sanskrit, Malay.

In reducing the element of the composite which pertains to *Eugenia malaccensis* Samoa with its *fi'a* differs from every language in the Polynesian system; yet this vanishing tendency of the first syllable shows itself in the initial abrasion which gives us Tahiti *ahiā*, Marquesas *ehia* and Hawaii *ohia*.

In Melanesia the trisyllabic form is maintained intact in Mota, Lo, Maewo, Arag, Marina, Tangoan Santo, Santo Wulua, and in Malo with the abrasion of the initial *k* as in the extremes of eastern Polynesia. Our next group includes the dissyllables which now appear as closed stems through abrasion of the final vowel; these are Merlav, Lakon, Mosin, Leon, Motlav, Malekula Pangkumu, and Tanna. We find yet a third group, dissyllables of open stem through the abrasion of the final consonant of the last preceding group; these are Norbarbar and Retan.

The change in the initial syllable from *a* to *c*, which we find in the remote Marquesas, is here observed in Santo Wulua, Mosin, Leon, Norbarbar, and Retan. Metathesis is observed in Leon from Mosin, and in Retan from Norbarbar. Retan *vege* might be *fika*, after the manner of the loss in Samoan; but as Leon *vegi* must be Mosin *gevig*, which is *kafik*, we prefer to consider Retan in accord with its neighbor. Motlav *na-gveg* I have classed in the foregoing with the dissyllables of closed stem. The initial *n* is the shadow of the article, just as *ni* in Tanna, but Motlav is a very difficult language to write because the article attracts the nearest vowel of the stem, in this case *gaveg*; therefore *na* is article for this word and in attracting has also subtracted.

Pak, Sasar, and Alo Teqel are a separate and unassociable group.

The Semitic proposed by Dr. Macdonald is clearly irrelevant.

194.

kori, kuri, oria, kuria, a dog, a brave, a warrior.

Samoa: 'ulī, a dog. Tonga, Futuna, Niuē, Uvea, Fotuna, Aniwa: *kuli*, id. Maori, Rarotonga, Mangareva, Paumotu, Sikayana: *kuri*, id. Tahiti: *uri*, id.

Viti: *kolī*, a dog.

Baki, Epi, Ambrym, Santa Cruz, Deni: *kuli*, a dog. Iai, Tanna, Eromanga, Malekula, Aneityum: *kuri*, id. Epi: *koria*, *kuliu*, id. Sesake: *koriia*, id. Malo: *vuria*, id. Tangoan Santo: *vuriu*, id. Bierian: *kuliu*, id. Santo: *wurin*, id.

Arabic: *gorw'*, a young dog; *gariyy'*, brave.

The identifications are satisfactory and the stem shows no variations until we reach Malo and Santo with the *k-v* mutation, which is found only in these two languages and in this word alone. The closely similar *k-w* mutation spreads over a wider area of speech, yet also is found in but a single word. The Santo word *wurin* derived from Dr. Macdonald's grammar of that language is so close to Tangoan Santo *vuriu* that I must regard the final *n*, otherwise incomprehensible, as a fault of the press.

The Arabic does combine in similar words the Efaté significations, yet not even on that account is it convincing in the absence of confirmatory evidence to bridge the gap.

195.

koto bolo, a basket (**bolo**, basket).

Samoa: 'ato, a basket. Tonga, Fotuna, Uvea: *kato*, a basket. Niuē: *kato*, a basket, a bag.

Viti: *kato*, a basket.

Lo: *gat*, a bag. Malekula: *na-cat*, a basket. Malo: *cete*, id. Tanna: *katum*, id. Aneityum: *in-cat*, id.; *nefehcat*, a large basket.

Arabic: *ka'tat*, a basket for carrying dates.

As *koto* means a basket and *bolo* means a basket, the use of synonyms in composition is an interesting example in Melanesia of the principle of determinant compounds, the existence of which in Samoan I have elsewhere established (14 Journal Polynesian Society, 40). *Koto* is readily identifiable with *kato* in Nuclear Polynesia and Melanesia and no forms call

for explanation except the as yet inexplicable *m*-final in Tanna *katum*. The Malo *cete* is here included. It is probably a member of the *kete* series, which it will at least serve to introduce here. The consonant skeleton being the same in *kete* and *kato*, we may venture to look upon them as variants of very early introduction.

Maori, Rarotonga, Futuna, Marquesas: *kete*, a basket. Tonga, Uvea, Viti: *kete*, the belly. Mangareva: *akaketekete*, to grow big (said of adolescent girls). Rapanui: *kete*, *keete*, basket, sack. Nuguria: *kete*, fishtrap, kiddie, food basket. Samoa: '*ete*, basket, bag. Tahiti, Nukuoro: *ete*, id. Hawaii: *eke*, a bag, a small sack. Mota: *gete*, a basket. Malo: *cete*, id. Aneityum: *in-ced*, *in-cet* (in composition), id.

The Aneityum with *in-cat* (*kato*) and *in-cet* (*kete*), Samoa '*ato* and '*ete*, establish satisfactorily the transition forms. As covering the sense passage from basket to Tonga, Uvea, and Viti belly, we may instance that in English of the Marquis of Queensberry rhetoric the bread-basket is a parallel case.

196.

koto-fi, kote-fi, to cut, to cut off, to break off.

Samoa: '*oti*, to cut, to clip (as the hair); '*oto*, '*otofia*, to pluck one here and another there. Tonga: *koji*, to cut with scissors; *koto*, to crop, to shorten shrubs; *koso*, to cut. Futuna: *koti*, to cut; *koto*, to pluck a leaf from its branch. Niuē: *kotikoti*, to notch. Maori, Rarotonga, Paumotu: *koti*, to cut. Marquesas, Mangareva: *kokoti*, id. Rapanui: *kokoti*, to cut off. Uvea: *kosi*, to clip, to shear. Tahiti: *oti*, id. Hawaii: *oki*, id. Viti: *koti*, shears; *kotiva*, to clip or shear; *kosova*, to cut across. Lambell: *koti*, to cut. King: *toki*, id. Lamassa: *kuti*, id. Mota: *got*, id.; *igot*, a cutter; *goso*, to stab. Pala: *kut*, to cut through. Arabic: *ḡata'a*, cut, cut off, separate.

The Proto-Samoan stems are **kotif** and **kotof**.

We here assemble three forms. *Koti* and *koto* are manifestly associable. As to the final radical consonant we establish *kotif* on Viti and Efaté, *kotof* on Samoa and Efaté, and *kosof* on Viti. Of these forms *kotif* and *kotof* are identical in respect of the complete consonantal skeleton and differ only in the unaccented and weak vowel; *kotof* and *kosof* are in vowel agreement and differ only in the *t-s* mutation, which has been proved a normal Polynesian change. With such strong concords and with such simple differences I regard the three as ancient variants of a parent stem.

Let us now examine the distribution of these forms.

kotif: Samoa, Viti, Efaté, Tonga, Futuna, Niuē, Maori, Rarotonga, Paumotu, Marquesas, Mangareva, Tahiti, Hawaii—in other words it belongs equally to the Proto-Samoan and the Tongafiti swarms.

kotof: Samoa, Efaté, Tonga, Futuna—purely Proto-Samoan.

kosof: Tonga, Viti, and Uvea an interesting transition form.

Our Melanesian material except in Efaté does not include *kotof*, the Mota *t*-stem being omitted from the consideration. In King we have a simple

metathetic variant. *Kotif* occurs in Efaté, in three of the New Ireland languages at the eastern Indonesian gateway, and probably here are to be classed the abraded Mota forms. *Kosof* is not positively but quite likely identified in Mota *goso*.

Tonga alone employs the three forms.

197.

lago, to prop, the wooden pins whose sharpened ends are driven into the **sama** (outrigger) of a canoe and whose upper ends crossed hold and bear up the **nakiat** (struts).

Samoa: *lāngo*, props to rest a canoe on, to raise on supports. Tonga: *lango*, a fulcrum, to raise by logs or pieces of wood, blocks of wood on which anything is raised. Niuē: *lango*, a support. Maori: *rango*, the skid or roller over which logs, canoes, and the like are dragged. Mangareva: *rango*, floor joists. Rapanui: *rango*, bed, scaffold, ladder; *rangorango*, stool. Rarotonga: *tirango*, threshold. Paumotu: *tirangorango*, joists. Tahiti: *rao*, a block or roller under a boat, sleepers under a floor.

Viti: *lango*, a threshold, pieces of wood on which anything is set.

Mota: *lango*, to put rollers under; *ilango*, a roller; *taplagolago*, cylindrical. Nggela: *tapalagolago* (from Mota), a cart, a wheel.

Merlav: *geilang*, a roller for a canoe. Santo: *lako*, props of a canoe.

Arabic: *rakaha*, to prop.

The Proto-Samoan stem is **langom**.

The word runs its course across our area with only the minor *ng-g* mutation in Efaté and Nggela and partly in Mota, and the equivalent *ng-k* mutation in Santo.

198.

māt', ebb, low water.

Samoa: *masa*, *taimasa*, low tide; *masamasa*, to be making ebb.

Futuna: *masa*, dry, waterless, empty. Nukuoro: *masa*, dry. Tonga: *mahaifo*, *mahamaha*, *mamaha*, ebb; *maha*, empty.

Niuē: *maha*, empty. Uvea: *maha*, dry. Rapanui: *taimaha*, low tide. Nuguria: *umasa*, low; *tai kumaha*, lagoon is dry.

Viti: *mati*, to ebb; *matha*, empty, dry.

Mota: *mamasa*, dry; *mamasaiga*, parched. Nggela: *mamaha*, dry (of land). Aneityum: *mese*, dry; *in-mas*, ebb tide.

Arabic: *māt'a*, to macerate and dissolve. Hebrew: *masas*, to melt, to flow down, to waste.

We have here two words: one, Efaté *māt'* and Viti *mati*, ebb tide, with no previous history; the other, *masa*, becomes ebb tide only in a resultant fashion. *Masa* has the basic signification of dry; this is the only sense in Uvea and Nukuoro, in Mota and Nggela; it is associated with another sense in Futuna, Viti and Aneityum. The first secondary sense, empty, is the only signification in Niuē, and in association with another sense it occurs in Viti and Futuna. The third signification is dryness in a restricted sense, the beach or reef from which the water has receded, that is to say, ebb or low water. This is the only sense in which the word is used in Samoa; in Tonga it is associated with the empty, and in Aneityum with the dry sense.

In Viti we find *matha* of the *masa* stem; this renders it quite unlikely that *mati* has any relation thereto. If Viti *mati* fails, then Efaté *māt'* is left unsupported. We are therefore justified in rejecting this identification, so far as it enters Polynesia; we can only recognize an Efaté-Viti identification to be added to the list of words established in Viti as of Melanesian source.

Of course even without these considerations the proposed Semitic identification fails utterly on the ground of sense, for it can have no relation whatever to words of the meaning here involved.

199.

māta, mwāta, a snake.

Samoa, Tonga, Futuna, Niuē, Uvea: *ngata*, a snake. Maori: *ngata*, a snail, a slug, a leech, a looper caterpillar. Fotuna: *ta-ngata*, a snake.

Viti: *ngata*, a snake.

Malo, Rubi, Dobu: *moata*, a snake. Mota, Mugula, Sariba, Misima: *mata*, id. Suau, Tavara, Awalama, Taupota, Wedau, Galavi, Boniki, Mukawa, Raqa, Kiviri, Oiun: *mota*, id. Santo: *mata*, *maura*, id. Bierian: *n'mata*, id. Malekula: *na-mat*, id. Baki: *maro*, id. Murua: *mateta*, id. Nada: *moteta*, id.

Arabic: *'it'a'*, *'at'ā'*, a snake.

The parent of these forms is a problem. It can scarcely have been *ngata*, for *ng* is a consonant which in all the Melanesian languages here adduced is susceptible of ready reproduction as *ng* or *n*. Still less can it have been *mata*, for in one of the Efaté forms, in Malo, and in Mota (Codrington distinguishes it as *mata*) we see a positive effort to express not the pure *m* which they have and use but something somehow different, a suggestion of *mb*. We have no means of determining or of representing a parent sound which shall class as its children *ng-mw-m*.

The identifications of this *ngata* are in other respects distinctly satisfactory. I can not include therewith the Baki *maro* and its congener Santo *maura*. These we shall consider true Melanesian material. The absence of the word from the Tongafiti migration (except Maori with its modified sense) is a zoological rather than a linguistic lacuna; it is conditioned by the fact that east of the strait which parts German from American Samoa there are no snakes.

The Semitic words mean snake; they possess an *a* and a *t* apiece, but these are insufficient proof of identity.

200.

mauri, to live; **maurian**, life.

Samoa: *māui*, a Manu'a salutation, *'ua māui mai*. Tonga, Niuē: *moui*, alive, life, to live. Futuna, Uvea: *mauli*, id. Vaté: *maūri*, to live. Aniwa: *mouri*. Nukuoro: *mouni*, to live. Fotuna: *no-mauri*, id.; *ta-mauri*, life: *emaui*, to feel well.

Viti: *maurimu*, a word of blessing used by the priests when people take a thing to the house of the god; conjecturally, *mauri*, life, and *-mu*, possessive suffix of the second singular, "thy life," or, "may thou live." Rotumā: *mauri*, to live; *amauri*, to make, to live; *amauringa*, savior.

Sesake, Ulawa, Waima, Kabadi, Galoma, Motu: *mauri*, to live. Saa: *mauri*, *meuri*, id.; *maurihe*, life, safety. Santo: *meuri*, to live. Bierian: *mauli*, id.; *ni mauliana*, life. Baki: *meouli*, to live; *meoulian*, life. Malo: *mauru*, life, to live. Tangoan Santo: *nauri*, to live. Mota: *maur*, to live. Malekula: *maur*, id.; *mauran*, life. Ponape: *maur*, to live. Marshalls: *mour*, id. Vaturanga: *maumauri*, to live; *maurisali*, life. New Britain: *wamaurpa*, to make to live. Tanna: *muriŋ*, life. Laka-toi language: *makuri*, life, alive. Keapara, Hula: *maguli*, life. Arabic: 'ās'a, 'āis', ma'as', ma'is', ma'is'at, to live.

Before discussing the stem in its greater extension I would comment on my identification in Samoa and Viti. When we observe the general use of *mauri*, to live, we should expect to find it certainly in Samoa and very likely in Viti. In neither does it appear on the surface; Samoa has *ola* to live, a word wholly of the Tongafiti migration, and Viti in *mbula* to live employs a word of Melanesian stock which enters Samoan only in the interjection *apulā* in congratulation upon safe delivery from a sneeze.

The Viti *maurimu* is susceptible of no other explanation based on existing Viti material, and the explanation which I have proposed has no objection other than that *mauri* is not elsewhere used in Viti as signifying to live; therefore I have no hesitation in believing this to be a valid explanation. It is interesting to observe that in wishing long life in ceremonial phrase the Viti uses the Samoan word, the Samoan the Viti. Yet we have a parallel example in our own speech. Those of us who salute the sneezer are more than likely to ejaculate *Prosit! Dieu vous bénisse! Gesundheit!* rather than English. Piety has always been prone to find somewhat esoteric in the foreign: "Mesopotamia, blessed word!"

In our Samoan authorities, and George Pratt was a marvel of recondite information, no explanation is offered of the pleasant Manu'a phrase 'ua māui mai. To give it sense by identifying it with *mauli* to live needs but to establish the evanescence of the inner liquid. In my work on Samoan phonetics (17 Journal of the Polynesian Society, 154) I have proved not only that this is a Polynesian change, but that it holds in Samoa in particular. In this material it needs but the comparison of Futuna with Tonga. The *l-n* mutation is peculiarly persistent in Nukuoro.

Thus far we have found the word Nuclear Polynesian and signifying to live. But it is found in Tongafiti possession and meaning native, indigenous rather than foreign. There is no gradation of signification. We are thus led to discriminate between the two swarms. The Proto-Samoan swarm left the common center with *mauli* meaning to live; the Tongafiti did not follow until it had popularized *ola* in the sense to live and had set *mauli* into the background of a secondary sense. Meaning native, it is in the following series: Maori, Tahiti, Mangareva, Paumotu: *maori*. Hawaii: *maoli*. Marquesas: *maoi*.

201.

nono, ne, noi, to dwell or be beside some one, to abide.

Samoa, Tonga, Futuna: *nofo*, to sit, to dwell, to live with. Niuē, Uvea: *nofo*, to sit, to dwell. Fotuna: *no-nofo*, to dwell, to remain. Fakaafo, Aniwa, Vaté: *nofo*, to sit. Maori, Tahiti:

noho, to sit, to dwell, to live with. Hawaii, Marquesas, Paumotu: *noho*, to sit, to dwell. Mangareva: *noho*, to remain, to dwell. Sikayana, Tongarewa: *noho*, to sit, to stay. Manahiki, Nukuoro: *noho*, to sit. Bukabuka: *noo*, to be. Rarotonga: *noo*, to sit, to dwell. Moiki: *noho*, id. Rapanui: *noho*, to sit, to dwell, a bench. Nuguria: *nofo*, to sit: *unoho*, to dwell; *nahoa*, bench.

Viti: *no*, to lie (of things); *nòndò*, a place to lie on. Rotumā: *noh*, to sit, *noho*, a place.

Motu: *noho*, to dwell, to stay. Vaturanga: *noho* (*are mate noho*, they are dead, have died: "this is, no doubt, the Maori *noho* to sit"—Codrington). Nggao: *nokro*, to sit. Pala: *noh*, to lie.

Hebrew: *navah*, *naah*, to sit down, to rest, to dwell.

The Polynesian stem is unalterably a dissyllable, the only change which it exhibits being the mutation *f-h*-extinction, the last being found in Rarotonga and Bukabuka. In Rotumā *noh* (i.e., *noho* under terminal abrasion) we find a transition form to *no* in Viti and Efaté, thence by reduplication *nono*. The principal objection to this chain of forms lies in the fact that while Viti and Efaté agree upon *no*-forms Motu and Vaturanga, at a greater backward distance from Polynesia, have *noho*. In Nggao *f-kr* gives us an anomalous mutation, of which this is the sole instance, for in all our collation of *f*-variants we find nothing approximating this wholly irregular *kr*.

The passage from *sit*-sense to *be*-sense seems far greater to us than to the islanders. They have not arrived at the need of a word to express being in the abstract. The occurrence of this signification in Vaturanga far to the west balances the extremeness of the easting of Bukabuka, in which it is again found.

202.

rakum, rakoma, a crab.

Samoa: 'ama'ama, a crab (Grapsidae) found in the rocks. Tonga: *kamakama*, a rock crab. Niuē: *kamakama*, a crab. Futuna: *kamakama*, a little black crab that lives in chinks of the rocks.

Viti: *nggumunggumu*, a kind of crab.

Epi: *lakum*, a crab.

Arabic: *h'umh'um'*, a crab.

We lack data on which to establish through transition forms the identity which seems probable between the *kama* of Nuclear Polynesia and the Efaté and Epi *ra-kum*.

203.

sar i, sari, to saw; **seri**, to cut with a sawing motion; **sāra**, a saw.

Samoa: *sala*, to lop, to cut off; *sele*, a bamboo knife, to cut or clip (as the hair); *selei*, to cut, to shear, to slash. Futuna, Uvea: *sele*, a knife, to cut off, to cut. Nukuoro: *selesele*, to carve, to engrave. Fotuna: *no-sere*, to cut; *seria*, a saw. Tonga: *hele*, a knife, to cut, to lacerate; *hehele*, to cut. Niuē: *hele*, *hehele*, to cut up, to reap, to castrate. Hawaii: *mahele*, to divide, to cut in pieces. Maori: *here*, a spear for killing birds. Paumotu: *kohere*, to cleave, to split.

Viti: *sele*, a bamboo knife; *seleva*, to cut with a knife, to castrate.
 Nggela, Belaga: *sari*, to cut. Malo: *sarosaro*, to saw; *isaro*, a saw.
 Mota: *sal*, to cut with a drawing motion; *gasal*, a knife; *sir*, to shave.
 Gog: *gasal*, a knife. Maewo: *siri*, to shave; *siriva*, to shave off something.
 Pak, Leon: *sir*, to shear. Sesake: *soro*, a saw; *soroa*, to saw. Pala: *sele*, a bush knife.
 Hebrew: *nas'ar*, to saw. Aramaic: *nsar*, id.

Throughout the data assembled in this item there is manifest a tendency to particularize the manner of cutting. Thus Efaté, Fotuna, Malo, Sesake, all specify the saw; Samoa, Pak, Leon have the shearing and clipping sense; Mota and Maewo shave; many of these languages indicate the knife; Nukuoro suggests the burin. From this presentation we might infer an equipment of saws, scissors, razors, lancets and all manner of edged tools. Far otherwise is the fact. The silex-edged bamboo splinter, the lip of a shell ground sharp, the tooth of a shark—these are the cutting tools of the Pacific islands, east as well as west. The definition is at fault which gives the sense of saw to any word of a people which has no tool that cuts by notches in a blade, of shear to men who know no scissors. It would be idle to seek to differentiate these words by the tool employed, for a rude knife is all there is. The most that we may venture upon is to segregate the data by the former vowel.

- E. *sele*: Samoa, Futuna, Uvea, Nukuoro, Fotuna, Tonga, Niuē, Hawaii, Maori, Paumotu, Viti—altogether Polynesian.
- seli*: Fotuna, Efaté—Melanesian, and wholly so if the Fotuna form be considered due to neighboring New Hebrides influence.
- I. *sili*: Mota, Maewo, Pak, Leon—all northern New Hebrides.
- A. *sala*: Samoa, Efaté. *salo*: Malo.
sali: Efaté, Nggela, Belaga. *sal*: Efaté, Mota, Gog.
- O. *solo*: Sesake.

Viti and Maewo seem to indicate a root closed in *v* which does not elsewhere appear, which had been quite lost at the time when Samoa erected the verb *selei* upon the noun *sele*.

204.

sik ē, sek e, saki, to raise; **sike-ti**, to grasp with tongs.

Samoa: *si'i*, to lift. Futuna: *siki*, to lift, to raise, to remove.
 Uvea: *fakasiisii*, to raise; *hiki*, to lift up. Tonga: *hiki*, to lift, to remove. Niuē: *hiki*, to land, as fish from a canoe. Maori: *hiki*, to lift up, to carry, to nurse. Mangareva: *hiki*, to hold a child in the arms or on the knees. Paumotu: *hiki*, to fondle. Mangaia: *iki*, to nurse a child in the arms. Marquesas: *hiki*, *hii*, to nurse a child. Tahiti: *hii*, to nurse, to dandle, to take a child in the arms. Hawaii: *hii*, to lift up, to carry, to nurse.
 Viti: *sikita*, to raise, to lift up.
 Aneityum: *ahiang*, to drag, to draw up.
 Hebrew: *hazak*, to hold fast, to take hold of, to seize.

The Proto-Samoan stem is **sikit**.

The Efaté *siketi* is associable by reason of its form, but the sense is too remote and too particular for a satisfactory identification.

In Polynesia are a primary and a secondary sense. The sense of to raise is exclusively Nuclear Polynesian including Efaté. In the Tongafiti migration the sense is exclusively to nurse a child, a particular instance of lifting up. I have been willing to mark the sharpness of this division by using in the foregoing sentence the word exclusively, yet with the full knowledge that Hawaii and Maori seem to contradict. I have already pointed out the evidence of single words showing a direct migration from Samoa to Hawaii by the north and to New Zealand by the south. This combination of the two sharply marked senses in Hawaii and Maori seems to me to be associable therewith.

Mr. Tregear's suggestion that Aneityum *ahieng* shows kinship with this stem does not commend itself to me.

205.

silā i, sela i, sol i, to rub, as to rub oneself with oil.

Samoa: *sōloi*, a towel, to wipe; *solo*, a towel, to wipe as after bathing. Futuna: *solo*, to wipe. Tonga: *holo*, a towel, to wipe, to dry; *holoi*, to wipe, to dry off, to rub off. Niue: *holoholo*, a handkerchief, towel, napkin, to wash the hands or body. Uvea: *holo*, *holoi*, *holoholoi*, to rub, to wipe, to clean. Hawaii: *holoi*, to wash, to wipe, to brush, to cleanse. Rapanui: *horoi*, to clean, to wipe out; *horohoro*, to brush. Maori, Tahiti: *horoi*, to wash. Mangareva: *horoi*, *oroi*, to wipe, to wash. Mangaia: *oroi*, to wash. Rarotonga: *orei*, to wipe, to wash. Marquesas: *hooi*, id.

Viti: *solota*, to rub, to dry oneself after bathing.

Motu: *huria*, to wash, to scrub. Mota: *sarag*, to wipe; *sarav*, to rub; *saravag*, to brush. Aneityum: *ruhoi*, to rub.

Arabic: "*asala*, "*usul*", to wash.

This *solo* stem is not clearly distinguishable from *olo* (331) to rub. The motion of the hands being the same, *solo* may be a particular instance of *olo*. For this reason it has not seemed desirable to attempt rigid accuracy in assigning the Melanesian examples.

In general we may note a distinction in sense between Nuclear Polynesia and the Tongafiti eastern extension, Nuclear Polynesia referring to the drying after bathing, eastern Polynesia to the bathing. The only exception to this in Nuclear Polynesia is Niue which has both senses. Maori, Tahiti and Mangaia are restricted to the washing sense; Hawaii, Mangareva, the Marquesas, and Rarotonga have both. In Melanesia Motu has the Tongafiti washing sense, Mota and Aneityum accord with Nuclear Polynesia.

Aneityum *ruhoi* is metathetic.

206.

siaa, siuo, siwo, suwa, sua, to descend.

The following words signify down, to be down, to come down:

Tonga, Niue: *hifo*. Samoa, Futuna, Uvea, Fotuna, Nuguria, Aniwa: *ifo*. Maori, Tahiti, Hawaii, Marquesas, Rapanui,

Mangareva, Moiki: *iho*. Paumotu: *ihoiho*. Nukuoro: *hakaiho*, to go down.

Viti: *sivo*, debased, dethroned, put out of office, a tropical sense germane to that in Samoa *ifonga*. Rotumā: *sio*, down.

These words signify down:

Vaturanga: *sivo*. Tangoan Santo: *sibo*. Omba: *hivo*. Nguna, Mota, Santo, Sesake: *siwo*. Malo: *siuo*. Merlav, Maewo, Sesake: *suwo*. Gog: *suw, sug*. Aneityum: *asuol, suko*. Lakon: *hew*. Eromanga: *sep*. Roro: *tivo*. Pokau: *divo*. Mekeo: *kipo*. Wedau: *ipu*. Mukawa: *sipu*. Tavana: *hopu*. Wedau: *opu*. Galoma: *ribo*. Keapara: *rigo*. Motu: *dihō*. Tubetube: *sio*. Raro: *zi, azi*.

Arabic: *safala, suful', sifl'*, to be low, to descend.

With unchanging vowels the Polynesian identifications move in a regular course of mutation of the two consonants, *s-h*-extinction, *f(v)-h*-extinction. We observe in this a tendency, not without exceptions, to maintain the labial strong when the lingual is preserved, and to obscure the labial in the aspiration of its series where the lingual has become extinct.

The Melanesian affiliates call for more detailed examination.

The sibilant is retained by all except that in Lakon it merges in the aspiration, and here the initial aspirate is explosive, as if *hv* or *vh*; Omba, too, employs the aspirate. We do not find a single instance in which the labial is of the same value as in Samoa. In two languages it has been strengthened to a mute, in Tangoan Santo to the sonant, in Eromanga to the surd. In these languages the surd spirant is replaced by the sonant, *v*: Vaturanga, Omba. In the greater number the reduction has progressed as far as the semivowel of this series, *w*, or to the nearest vowel, *u*, the distinction not being made clear in the absence of the scientific alphabet: Efaté, Nguna, Mota, Santo, Sesake, Merlav, Maewo, Gog, Lakon, Malo. In two instances there occurs the rare leap from labial to palatal, to *k* in Aneityum and to *g* in Gog. The former vowel remains at *i* in about half of Melanesia. It changes to *u* in Efaté, Merlav, Maewo, Sesake, Gog and Aneityum, Efaté and Sesake having the *i*-form as well. It changes to *e* in Lakon and Eromanga. The latter vowel remains fixed at *o* except in Efaté and the languages which admit terminal abrasion, Gog, Lakon, and Eromanga. The Aneityum *asuol* I include because of the sense, but I can not identify the beginning and the ending, yet embraced therein is an element which, if independent, could be referred to *sifo*.

207.

tabu, tab, bakatabu, tabu, to be forbidden, prohibited, sacred.

Tonga: *tabu*, forbidden, consecrated, sacred. Samoa, Futuna, Niuē, Uvea, Maori, Tahiti, Rarotonga, Rapanui, Marquesas, Mangareva, Fotuna, Aniwa: *tapu*, id. Paumotu: *tapu*, an oath, to swear. Nukuoro: *tapu*, prohibition. Hawaii: *kāpu*, forbidden, consecrated, sacred.

Viti: *tambu*, unlawful, forbidden, sacred.

Buka, Baravon, Nggela, Belaga: *tambu*, sacred, holy, prohibited. Merlav: *vatambu*, to make holy. Omba: *tambetambe*, to worship. Duke of York: *tabu* (*watabunabulu*), sacred. Dobu, New Britain: *tabu*, sacred, holy, prohibited; *watabu*, to hallow. Suau: *tabuna*, sacred. Pokau: *kabukabu*, id. Mekeo: *afu*, id. Motu: *koau-ahu*, id. Aneityum: *in-tap*, a sacred place; *itap*, sacred, holy, forbidden; *imiitap*, to hallow, to make sacred. Mota: *tapu*, sacred. Malo: *sab*, *saburu*, id. Tanna: *asim*, id. Bierian: *ham*, id. Motu: *tabu*, a very important feast, a species of mythical beings. Arabic: *dabba*, *dabbu*, to prohibit.

An interest exterior to our present study pertains to this word in the fact that it is one of the two words, tattoo the other, which the English has borrowed from the Polynesian.

In scarcely altered skeleton of vowels and consonants *tapu* occurs in Polynesia and in Melanesia. In the western island world it undergoes less variation than almost any of the Polynesian loan material. In Omba the final *u* becomes *e*, in Efaté and Aneityum it undergoes a terminal abrasion.

We need give particular attention only to the following forms.

Malo *sab* (of a man) *saburu* (of a woman). This needs but the establishment of the *t-s* mutation to prove its identity. I have already (17 Journal of the Polynesian Society, 212) proved it to exist as between Polynesia and Viti; in the material now under examination it clearly appears in *talinga* (350) ear Marina *salinga*, *buto* (247) navel Buka *vuso*, *mate* (318) to die Aneityum *mas*.

Next upon this follows Tanna *asim*. Taking the *s* as now accounted for, we have to consider a *p-m* mutation. In note 190 I have found a case which is susceptible of this interpretation, and taking that with this there seems to me a probability of this change. We have abundant proof of a nasal reinforcement of *p* and *b*, *mp* and *mb*. It is quite possible that when such a nasalized consonant was transmitted at second hand to others to whom the double consonant was harsh they might excise the radical member of the composite and in their ignorance of the true form retain the purely accidental nasal. Bierian *ham*, then, would derive from Malo *sab* in the vowel and from Tanna *asim* in the *p-m* mutation, while the change from *s* to *h* is so common as to call for no note.

208.

tafe, tabe, to flow out, to go out.

Samoa, Tonga, Futuna, Niuē, Uvea: *tafe*, to flow, to run. Fotuna: *no-tafe*, id. Tahiti, Mangareva: *tahe*, id. Paumotu: *tahe*, a river. Nukuoro: *tahea*, to drift along. Maori: *whakatahe*, to clear from obstruction, as a watercourse or channel. Hawaii: *kahe*, to run, to flow. Marquesas: *tahe*, to flow, to gush, to stream, to trickle. Rapanui: *tahe*, to flow. Nuguria: *tahe*, a current.

Viti: *ndave*, to flow; *ndavendave*, the channel in which liquids flow, or the source of them; *ndaveta*, a passage through a reef.

Nggela: *tave*, to flow. Motu: *atahedid*, to overflow. Malekula: *jivjiv*, to run (nose). Malo: *madividivi*, id. Baki: *jevi*, id. Aramaic: *dub*, to flow out. Hebrew: *zub*, id.

There is no need to comment upon the identifications within the Pacific area except in respect of one particular. Viti *ndaveta* has a form resemblance to *ndave* but the sense does not so clearly hang. I have included it here because it seems to suggest a radical *tafet*, which may appear also in Motu *atahedid*. Yet in Viti the passive is *ndavena*, in which the suggestion of final *n* is equally worthy of consideration. In Polynesia there is no evidence to warrant the idea that *tafe* was ever other than an open root.

209.

tanga, tonga, tronga, rong, a basket, the stomach.

Samoa: *tanga*, a basket. Futuna: *tanga*, a sack. Niuē, Uvea, Rapanui, Nukuoro: *tanga*, a bag. Tonga: *tangai*, a narrow bag, a sack. Nuguria: *tana-mimi*, the bladder. Viti: *tanga*, a bag, a pocket, a purse. Arag: *tanga*, a bag. Sesake: *ndanga*, id. Motu: *tanga*, a bag, a deep basket. Tangoan Santo: *tanga*, a basket. Hebrew: *ṭene'*, a basket.

210.

tef i, tefi, tetefi, to cut, to circumcise.

Samoa: *tefe*, to cut, as circumcising. Fotuna: *tefe*, to circumcise. Maori: *tehe*, the glans penis left uncovered by the prepuce as if circumcised. Tahiti: *tehe*, to castrate animals, to slit the prepuce above. Mangareva, Marquesas: *tehe*, to circumcise, to castrate. Rapanui: *tehe*, to split; *tehetehe*, a notch. Hawaii: *kahe*, to cut or slit longitudinally, to castrate; *kaheomaka*, *kaheule*, to circumcise after the Hawaiian fashion. Viti: *teve*, to circumcise. Mota: *teve*, to cut with a drawing motion; *teveleve*, a knife. Merlav: *teveve*, a knife. Malekula: *teve*, to circumcise, to cut with a bamboo knife. Bierian: *mdeve*, to circumcise. Baki: *jivi*, id. Arabic: *'aṣ'aba*, to cut.

Little calls for note in the Pacific identification. In Hawaii we observe the *e-a* change which does not elsewhere appear. The Bierian *mdeve* is a variant of the *t-nd* characteristic of that Epi dialect. The Baki *jivi* and *tafe* (208) to flow Malekula *jivjiv* to run at the nose exhibit the *t-j* mutation which is rare in Melanesia but is the normal change from Samoa to Tonga before *e* and *i*.

The word appears in Nuclear Polynesia only in Samoa and Viti, and is there restricted to circumcision. In its occurrence in eastern Polynesia it combines with the circumcision sense that of castration. In Samoa it is defined as "the operation equivalent to circumcision," in Hawaii "to circumcise after the Hawaiian fashion," in Tahiti "to slit the prepuce above." The operation is so singular that in almost all the versions of the Bible in the Pacific the word circumcision has been rendered by *peritomē*, a transliteration from the Greek, rather than by the employment of this word from the vernacular.

The operation is surgically described by Dr. Krämer in "Samoa," ii, 61:

Die Beschneidung, 'o le *tefenga* (*tefe* beschneiden), bei der es sich nicht um Circumcision wie die Engländer sagen, handelt, sondern um einfache Spaltung der Vorhaut, also Einschneidung am oberen Rande, wie allgemein in Indonesien üblich, wird so ausgeführt, dass man einen Spatel unter die Vorhaut schiebt und diese durch einen Schlag mit einem scharfen Gegenstand als Haifischzahn, Muschel, Bambusmesser, neuerdings natürlich mit Eisenmesser durchtrennt. Sie wird bei den samoanischen Jünglingen, ähnlich wie bei den Mohammedanern, bei Eintritt der Mannbarkeit, stets zwischen dem 7. und 15. Lebensjahre ausgeführt. Religiöse Gebräuche wie bei andern Völkern, z. B. auf Fidji, wo die Operation auf den Nangaplätzen geschah und wo richtige Circumcision geübt zu werden scheint, scheinen auf Samoa nie mit der Operation, die meist von einem darin Erfahrenen ausgeübt wurde, verbunden gewesen zu sein. Das leitende Motiv scheint für Samoa nur in der Reinlichkeit zu liegen, indem gesagt wird, dass kein samoanisches Mädchen mit einem unbeschnittenen Jüngling schlafen würde. Deshalb nennen die Samoaner die Blüte der Amorphophallus-Pflanze (*teve*) welche dem männlichen Gliede nicht unähnlich sieht und einen fötiden Geruch verbreitet, wie ich mich selbst zu überzeugen Gelegenheit hatte, *tafao*, und ebenso nennen sie einen unbeschnittenen Jünglingspenis. Der Arzt weiss, dass dies nicht ohne Grund geschieht. Wenn man nun behauptet, dass die Beschneidung bei den Juden an Stelle unserer Taufe (am 8. Tage) ausgeübt, rein rituell sei, und dass Reinlichkeitsgedanken ferne lägen, so mag das sekundär so geworden sein, ursprünglich wird man aber die bei den orientalischen Völkern ausgeübte Beschneidung auf den Reinlichkeitsgedanken, der in Samoa nach längst eingeführtem und allgemein ausgebreitetem Christentum heute allein noch diese Sitte aufrecht zu erhalten im stande ist, zurückführen müssen.

211.

tuk i, tuki, to strike, to beat, to pound.

Tonga: *tuki*, to strike, to drive, to drub. Futuna: *tuki*, to beat, to strike, to hit with a hammer, rock or fist. Uvea: *tuki*, to strike, to beat. Niuë: *tuki*, to knock. Nukuoro: *tuki*, to beat, to strike, to pound. Maori: *tuki*, to ram, to butt, to strike endwise, to beat. Rarotonga: *tuki*, to strike, to beat. Rapanui: *tukituki*, to bray. Marquesas: *tuki*, to beat poi, to bruise, to strike, to bray with a pestle. Mangareva: *tuki*, to pound, to bray with a pestle. Paumotu: *tukituki*, to hit against, to strike, to pound. Nuguria: *tukituki*, to beat; a breadfruit beater. Fotuna: *no-tukia*, to strike with the fist. Samoa: *tu'i*, to thump, to beat, to pound, to strike with the fist. Tahiti: *tui*, to butt, to strike, to pound. Hawaii: *kui*, to pound with the end of a thing, to smite, to hammer.

Viti: *tuki*, to beat or knock with the fist, to hammer.

Belaga: *tutui*, to pound. Baki: *juki*, to strike with the fist. Malekula: *tice*, id. Pala: *tuke*, to beat.

Hebrew: *duk*, *daḳaḳ*, to beat, to pound. Arabic: *dakka*, *daḳḳa*, id.

There is nothing in these identifications involving any principle with which we have not already become familiar.

There is, however, an interesting specialization in the sense. It is, of course, well understood that peoples on the speech plane in which we find the languages of this study have a large number of distinct terms whereby to describe an act as performed in a certain manner or through the employment of a certain implement in cases where the languages of superior culture make use of a general term for the act limited by an adverbial modifier

detailing the manner or the implement. Thus, in the terms of the present instance, we should say "to strike with A, B, C, . . . X, Y, Z," covering every possible thing with which a blow could be inflicted from the simplest pugilism through fustigation to the culmination of the bolt from the blue ineluctable. But our islander would maintain a series of distinct verbs from "to strike with A" clean through to the crisscross row if the tale of his striking machinery should extend so far.

In this instance we shall find that we are dealing with material collected by just short of a score of observers, each independent of the other, each under the control of his own personal equation of observation, appreciation, and ability to reproduce in one language the idiom of another. For this reason we shall all the more highly regard the evidences of special sense in *tuki*. Maori gives us "to strike endwise," Hawaii "to pound with the end of a thing," the Marquesas and Mangareva the same idea in particular terms as "to bray with a pestle." Next we find a group "to strike with the fist," Futuna, Samoa, Viti, Baki, Malekula. From sight of many such encounters I can aver that Pacific pugilism has none of the niceties of the straight-arm jab, the left hook to the jaw, and the other fine touches of the diction of the prize ring. A blow in such combats is delivered by regarding arm and fist as helve and head respectively of a hammer wherewith to belabor the head and shoulders of the opponent. The motion of such a blow is exactly that of using the pestle or the hammer or the rock in the hand. The motion can be traced still farther by the curious in the definitions here assembled.

212.

ulua, to put forth leaves, to grow up (of plants and hair); **uluulua**, to be full of leaves, to be hairy.

Samoa: *uluulu*, to be umbrageous (of trees), to be bushy (of the beard). Tonga: *ulu*, thick, bushy (as a dress of leaves). Niuē: *ulu*, hair. Nuguria: *rauulu*, id. Hawaii: *ulu*, to grow; *uluulu*, to grow thick. Maori: *uru*, a single hair. Mangaia: *uruuru*, coarse hair. Mangareva: *uru*, feathers, hair on the body.

Viti: *vakaulu*, having a large head of hair or a wig.

The following words signify hair:

Lo: *ul*. Deni: *ulu*. Mota, Maewo: *ului*. Sesake: *ululu*. Epi, Arag: *ilu*. Ambrym, *ili*, *wolu*. Marina: *vul*. Omba: *vulugi*. Norbarbar: *wulugi*. Volow: *iligi*. Nifilole: *lu*. Suau: *uru*. Tubetube: *hulu*. Mugula, Sariba: *kuru*. Nada, Kiriwina: *kulu*. Tagula: *wuluwulia*.

Arabic: '*ala*, '*aluw*', to go up; '*ilawat*', the head. Hebrew: '*alah*, to go up; '*aleh*, leaf, leaves; '*oleh*, sprouting forth, growing up.

lulu, hair (of the head, face or body).

The following all mean hair, feather:

Samoa, Uvea, Futuna, Tonga, Niuē: *fulu*. Maori, Tahiti: *huruhuru*. Mangareva: *huru*. Rapanui: *huhuru*. Nuguria: *hahuru*. Hawaii: *hulu*. Marquesas: *hu'i*. Rarotonga: *uru*. Viti: *vulua*, hair about the pubes. Rotumā: *leav*, hair.

In connection with the words here assembled it is quite impossible to dissociate the two stems *ulu* and *fulu*. It is probable that in my theory of word formation by consonantal coefficients the explanation will be found.

Before proceeding to our task of tracing out the intricacies here presented I wish to call attention to the existence in Polynesia of yet another word for hair, *lauulu*. Where a distinction is made *fulu* is the hair of the body, *lauulu* that of the head inclusive of the beard, yet frequently accompanied by a specific term for the beard.

Tregear interprets this as *lau* leaf and *ulu* head; such also is the interpretation given by the islanders, the value of their etymologies having been mentioned in note 169. This is very simple, very obvious. Yet the form of *lauulu* used in Tahiti is *rouu*, and in that language *ro* does not mean leaf at all; nor yet does it in the Viti dialect which employs *ro ni vulu* for *ndrau ni ulu* in the same sense. Furthermore, the *vulu* in the Viti Levu form is not *ulu* head but *vulu* hair, and *ndrau* itself means hair as well as leaf. Thus we have found that hair as "the leaves of the head" is not such a simple explanation as it appears.

Having already established the nature and employment of determinant compounds, I recognize in this composite *lauulu* two words of one identical sense among others, *lau* hair and *ulu* hair; their employment together determines for the composite the sense of hair beyond any doubt. Codrington (Melanesian Languages, 73) seems to have felt some suspicion about the leaves of the head explanation, but, the determinant compound not having come within his knowledge, he was unable to carry on his note to a satisfactory issue.

We shall now examine the interlacing of these two stems in the area of their greatest intricacy, Melanesia; and shall rearrange the material in the order of a developmental series. It should be noted that such terminations as *gi*, *ge*, and *i* are merely local means to indicate a noun as absolute.

fulu series.

vulu: Gog, Malo, Omba, Mosin,
Vuras, Eromanga.

wulu: Norbarbar.

wolu: Ambrym.

holu: Buka.

weu: Duke of York,

houi: Motu.

vul: Marina, Lakon.

vili: Makura, Bierian, Pak, Sasar,
Alo Teqel.

viji: Baki.

ulu series.

ulu: Deni, Malo, Sesake, Mota,
Maewo.

uli: Merlav.

ilu: Epi, Arag.

ili: Ambrym, Volow, Motlav.

ul: Lo.

lu: Nifilole.

kalu: New Georgia.

The two series inosculate in *vulu-ulu*, *vili-ili*, thus showing that the intimacy of their interrelation is not fortuitous. The bare simplicity of Nifilole *lu* is repeated in the Efaté *lulu*. The Eromanga *novlimpu* becomes clearer by indicating the several members of the composite, *no-vli-mpu*. Baki *viji*, so close to its neighbor Bierian *vili*, clearly establishes an *l-i* mutation; we find confirmation in *sala* (339) path Bugotu *hatautu*, and (*l-nd*) *langi* (308) sky Buka *indengid*. Finding, then, in Melanesia this form

in *t* we may incline toward a warmer reception of Indonesian *t*-forms where the vowel is truer to stem than in Baki. Such are Tidore, Galela: *hutu*; Menado: *uta*; Sanguir: *utan*; Gah: *uka*; Matabello: *uá*; Batumerah: *huá*; Wahai: *hue*. Other Indonesian forms in which a resemblance appears are these: Mayapo: *folo*; Massaratty: *olofolo*; Cajeli: *buloni*; Baju: *buli tokolo*; Malagasy: *volo*; Bouton: *bukwa*; Ahtiago: *ulufuim*; Tobo: *ulvu*; Salayer: *uhu*; Teluti: *keulo*; Morella: *keiule*; Liang: *kaiola*; Caimarian: *keori*.

Rotumā *leav* and Tobo *ulvu* and Ahtiago *ulufuim* show interesting varieties of metathesis. Assigning position, we mark *vulu* 1234; then Rotumā represents 3412, Tobo 4312, and Ahtiago probably 4321, or less likely 2341.

EFATE-MELANESIAN-VITI-POLYNESIAN-MALAY.

213.

banga, bangan i, fanga, to feed, to charge, to fill.

Samoa, Tonga, Uvea: *fajanga*, to feed. Tonga: *fajangai*, id.
Futuna, Niuē, Paumotu: *fangai*, id. Tahiti: *faaai*, id. Rapanui: *hangai*, id. Hawaii: *hanai*, id. Maori: *whangai*, to feed, to nurture. Mangareva, Rarotonga: *angai*, to feed, to nourish. Marquesas: *hakai*, to feed.

Viti: *vākania*, to feed.

Mota: *vangan*, to feed. Nggela, Bugotu: *vanga*, food. King: *ivangón*, to eat. Lambell: *hangán*, id. Lamassa: *angán*, id.

Malagasy: *mamahana*, to feed, to load a gun; *ma* causative and *fahana*.

The Proto-Samoan stem is probably **fangan**. Yet the final *n* nowhere appears in Polynesia, while it is plainly to be seen in Efaté, Mota and our three New Ireland languages.

Dr. Macdonald's identification with Viti *vākania* at first seemed to me wholly superficial. On closer examination it is found to be worse; it is an attempt to wrest the record. The only place in which the word appears in the Viti dictionary is not in its alphabetic place, but as a note under the word *kana* to eat, of which it is clearly stated to be a causative. That our author had this entry before his eyes is shown by the fact that he cites the word as *vākani-a*, just as Hazlewood has printed it. He forgets that he identified it correctly in 46. Since *vā* is the causative prefix and *kana* means to eat there can be not the remotest relation with the **fangan** stem. The discussion of these two Viti stems will be found under 214 and 46 respectively.

In Polynesia generally the word is transitive, yet there are uses in which evidence appears of the intransitive as well. Regarding the primary sense of the word as transitive, we find in its use as signifying the charging of a gun or the filling of a pipe in Efaté no great deviation from an elemental signification of putting something into the mouth.

214.

baka, faka, causative prefix.

Tonga, Paumotu, Niuē, Futuna, Uvea, Fakaafo, Fotuna, Sikayana, Aniwa: *faka*. Marquesas, Paumotu, Nukuoro, Rapanui, Tongarewa: *haka*. Maori: *whaka*. Samoa: *fa'a*. Tahiti,

Uvea, Tonga: *faa*. Tahiti, Hawaii, Marquesas, Nukuoro: *haa*.
 Moriori: *hoko*. Hawaii: *hoo*. Paumotu: *fa*. Hawaii: *ha*.
 Maori: *wha*. Hawaii: *ho*. Rarotonga, Mangareva, Bukabuka: *aka*.
 Mangareva: *anga*. Rapanui, Paumotu: *a*.
 Viti: *vaka*, *va*. Rotumā: *faka*, *fak*, *a*.
 Sesake, Kiriwina, Santo, Nguna: *vaka*. Malo: *vaca*. Marina:
 Nggela, Belaga, Sinaugoro, Omba, Maewo, Mota: *vaga*. Fagani:
faga. Tangoan Santo: *thaka*. Keapara: *vaha*. Ulawa, Wango,
 Saa, Ugi: *ha'a*. Sesake, Nguna: *paka*. Bierian: *baka*. Sesake,
 Marina, Arag, Merlav, Gog, Lakon, Mota, Motlav, Volow, Lo,
 Deni, Vaturanga, Nggela, Bugotu, Motu, Pak, Leon, Vuras,
 Mosin, Baki, Kabadi, Hula, Nguna: *va*. Nifilole, Duke of
 York, Raluana, Kabakada, Matupit, Baravon: *wa*. Aneityum:
ua. Nggao: *fa*. Roro, Pokau: *ba*. Mekeo, Panaieti, Nguna:
pa. Motu, Pala: *ha*. Nengone, Lifu, Motu, Panaieti, Dobu: *a*.
 Motlav, Pak, Leon: *ve*. Vuras: *vi*. Norbarbar, Alo Teqel: *v*.
 Savo: *au*. New Britain: *wara*. Malekula Pangkumu: *vaha*.
 Sulu: *mak*, *maka*. Tagalog, Bicol: *mag*, *pag*.

faka: Futuna, Efaté, Tonga, Paumotu, Uvea, Rotumā, Samoa.

faga: Fagani.

faa: Tahiti, Uvea.

fak: Rotumā.

vaka: Nguna, Viti, Sesake, Malo, Santo.

vaga: Marina, Maewo, Omba, Mota, Nggela, Belaga.

vaha: Malekula Pangkumu.

baka: Efaté, Bierian.

paka: Nguna, Sesake.

whaka: Maori.

haka: Marquesas, Paumotu, Nukuoro, Tongarewa.

thaka: Tangoan Santo.

haa: Hawaii, Ulawa, Tahiti, Marquesas, Wango, Saa, Ugi, Nukuoro.

hoko: Moriori.

hoo: Hawaii.

aka: Rarotonga, Mangareva, Bukabuka.

anga: Mangareva.

fa: Uvea, Nggao, Paumotu, Efaté.

fā (fā): Tonga.

va: Viti, Sesake, etc.

wha: Maori.

ba: Efaté.

ve: Motlav, Pak, Leon.

vi: Vuras.

v—: Norbarbar, Alo Teqel.

b—: Efaté.

f—: Efaté.

pa: Nguna.

ha: Hawaii.

ho: Hawaii.

wa: Nifilole, Duke of York, Raluana, Kabakada, Matupit, Baravon.

ua: Aneityum.

a: Rotumā, Nengone, Lifu, Paumotu.

au: Savo.

wara: New Britain.

It is manifest that two forms are here involved and that the sense is identical. I have given close attention to the examination of those languages in which the two forms are in use simultaneously, and except for one slight discrimination I have failed to discover any principle in the selection of the form which shall be used. It is not euphonic, for the long form is used before consonants as well as before vowels and the same is equally true of the short form. The only discrimination which I have satisfied myself to exist consistently is in Uvea, where *faka* is causative and *fā* (*faa*) is used of resemblance.

The stems are *faka* and *fa*. Rotumā *fak* is the only vestige of the transition form.

To show the devolution I have rearranged the forms in two lists. We need comment on but few facts. The forms in *o* seem to have developed sporadically and, of course, independently in Hawaii at the extreme northern limit of the Tongafiti swarm and in Moriori at the extreme south and apparently earlier than the Tongafiti movement. Not a vestige of the *o* has been retained along the migration tracks. In Savo *au* and New Britain *wara* we find apparently irreducible forms, possibly heterogenetic.

215.

bia, bisa, fia, fisa, how many.

In the same sense—

Tonga, Niuē: *fiha*. Samoa, Futuna, Uvea, Nukuoro, Aniwa, Nuguria, Sikayana: *fia*. Maori, Moiki, Tahiti, Marquesas, Mangareva, Rapanui, Paumotu: *hia*. Mangaia: *ia* (*eia*).

Viti: *vitha*.

Mota, Maewo: *visa*. Sesake: *pisa*. Vaturanga: *ngisa*. Pala: *hise*. Wango: *siha*. Arag, Ambrym: *viha*. Nggao: *ngiha*. Baravon: *aivia*. Moānus: *tjē, tá tjē*.

Malay: *hia*, what.

The Proto-Samoan stem is **fiha**.

Dr. Macdonald disposes of the matter with the declaration "the final part of *bia* and *bisa*, namely *a* or *sa*, is the interrogative pronoun." Reference to these several words in their proper places in the dictionary confirms his statement—so far as relates to Efaté. He offers no explanation for the former element of such a composite, and I have none to suggest. But:

Language.	How many.	What.	Language.	How many.	What.
Mota.....	visa	sava	Wango.....	siha	e taha
Maewo.....	visa	sava	Arag.....	viha	hava, havanau
Sesake.....	pisa	sa	Ambrym....	viha	ha
Vaturanga...	ngisa	na hua	Nggao.....	ngiha	na no

It is tantalizingly close, yet with such instances as Vaturanga and Nggao we are debarred from accepting the explanation until we know enough of the *fi*-element to enable us to account for the word as a whole.

216.

matua, to be old, mature, large, great, wise.

Maori, Manahiki, Tongarewa: *matua*, parent. Rarotonga, Bukabuka: *metua*, id. Samoa: *matua*, parent, mature, elder. Tonga: *matua*, parents, old people; *motua*, old, mature, ripe. Futuna: *matua*, old, parents, mature, ripe. Niuē: *matua*, parent; *motua*, old. Uvea: *matua*, parents, old, mature. Rapanui: *matua tamaroa*, father; *matua tamaahine*, mother. Tahiti: *-matua*, old; *mitua, metia*, parent. Marquesas: *motua*, father. Mangareva: *motua*, father; *-matua*, old. Nuguria,

Sikayana: *matua*, old. Aniwa: *tomatua*, to be able. Hawaii, Paumotu: *makua*, parent, old, mature. Fotuna: *mahtua*, old. Viti: *matua*, ripe, mature. Nggela: *kukua*, ancestors. Laur: *imátuk*, ripe. Lambell: *makós*, id. Lamassa: *imakós*, id. Bierian: *matua*, old; *tamatua*, old man. Tanna: *matu*, ripe. Santo: *metua*, ripe. Mota: *matua*, ripe, full-grown. Aneityum: *meto*, ripe. Pala: *matua*, uncle. Malagasy: *matoa*, eldest son or daughter. Malay: *mântuwah*, a parent-in-law; *mentua*, mother. Macassar: *matowang*, father-in-law.

Three senses are involved herein, to be old, to be ripe, parent. I should like to see my way to the idea that age is the central idea, but the material does not warrant this conclusion—or, in fact, any. The three senses (assuming the mature of the dictionaries to cover ripe) appear concurrently in Tonga, Uvea, Futuna, Hawaii, Paumotu. In Samoa *matua* does not mean ripe and that language is not included in this category. Concurrence of the two senses old and parent obtains in Samoa, Niuē, Tahiti, Mangareva. Differentiated forms (*matua*, *motua*) are found in Tonga, Niuē, Mangareva; and in Tahiti *matua*, *mitua*, and *metua*. In Tonga and Niuē *motua* is old and *matua* is parent, which is its sole signification in Maori, Manahiki, and Tongarewa. But in Tahiti and Mangareva the usage is opposite. In the Marquesas *motua* is the only form and its only sense is father.

In our Melanesian area Nggela *kukua* ancestors is included only as suggesting a partial resemblance. Efaté is the only language which gives the stem an extended range of meaning. Bierian shares with it the common Polynesian signification of old. All the other forms have the sole meaning of ripe and the languages employ other words for age and parent.

217.

tema na, tama na, father.

In the same sense—

Samoa, Fakaafu: *tamā*. Aniwa: *tama*. Tonga, Uvea: *tamai*. Futuna, Sikayana, Fotuna, Nuguria, Nukuoro: *tamana*.

Viti: *tama*, father.

Pala, New Britain: *tamà*. Redscar Bay (N.G.): *tamaa*. Aneityum: *etma*. Eromanga: *temi*. Mota: *tamai*. Nifilole: *tumai*. Mota, Duke of York, Buka, Baravon, Nggela, Laur, King, Sesake, Malo, Bierian, Tangoan Santo, Arag, Vaturanga, Bugotu, Motu, Sinaugoro, Rubi, Suau, Sariba, Tubetube, Panaieti, Misima, Nada, Murua, Kiriwina, Dobu, Mukawa, Kubiri, Raqa, Kiviri: *tama*. Oiun: *tame*. Tanna: *timi(n)*. Santo: *tima*. Pokau, Doura: *kama*. Ulawa, Wango, Uni: *'ama*. Fagani: *wama*. Saa, Bululaha, Wagawaga, Mekeo, Hula, Keapara, Galoma, Tavara, Awalama, Taupota, Wedau: *ama*. Roro: *hama*. Nggao, Lo: *ma*. Mota, Omba, Gog, Alite, New Georgia, Koita, Motu: *mama*. Boniki, Galavi: *mamai*. Merlav, Lakon, Pak, Sasar, Vuras, Mosin, Alo Teqel, Motlav, Volow, Norbarbar: *mam*. Malekula, Tangoan Santo: *tata*. Nengone: *chacha*. Baki: *karama*. Panaieti, Misima: *nam*. Tagula: *rama*. Raqa: *dada*.

Salayer, Liang, Lariko, Saparua, Awaiya, Caimarian, Wahai, Teor:
ama. Morella: *a'ma*. Cajeli: *a'mam*. Ahtiago: *amái*. Teluti:
amaeolo. Amblaw: *amao*. Bouton: *amana*. Menado: *iamá*.
 Sanguir: *yaman*. Tobo: *jaman*. Bolanghitam: *kiamat*. Gah:
mama. Mysot: *mām*. Mayapo: *nāma*. Massaratty: *náama*.

In the Polynesian this is distinguished from *tāma* child by the accent *tamā* or by the addition of a final syllable which automatically secures the same incidence of the accent, *tamái*, *tamána*. Diacritical marks have been but sparingly used in our Melanesian vocabularies and for that reason we lack a sure guide as to the accenting of the western affiliates. We find but the cases of New Britain, and Pala in which the accent is printed, and Mota, Nifilole, Redscar Bay, and Aneityum in which it is inferential. In not one of these languages have we any evidence of the use of *tāma* child, therefore the accent is not a differential in their own material, but has carried its ictus from the source whence the *tamā* father has been borrowed.

We shall first examine the languages which retain the *t-m* consonant skeleton. There is a long series in which the two vowels remain as in Polynesian; they are therefore identical words except that the accent may vary, and on that point we are without information. The final *a* is almost wholly permanent, not only in the *t-m* series but in the *m* series which will come up for our later consideration. The solitary exceptions are Tanna *timi(n)* and Eromanga *temi*. The former *a* in this case becomes *e* in Eromanga and *i* in Tanna. The *i*-mutation also appears in Santo *tima*. In Nifilole we find *u* in *tumai*.

Our next variant of *tamā* involves frontal abrasion affecting the *t*. This we find in two discrete areas in the Solomons, respectively, north and south of Malanta and separated by an area of greater degradation. With the *ama* of this abraded type I include Fagani *wama*.

This middle type gives us a suite of occurrences of the transition form by which we arrive at forms in which not only the initial *t* but the vowel *a* thus become initial have been subjected to frontal abrasion. The simplest form is *ma* in Nggao and Lo. By reduplication of *ma* we may more logically account for *mama* than by attempting to establish a *t-m* mutation. By final abrasion of *mama* we arrive at *mam*, a form very widespread in the Banks Group, the northern subdivision of the New Hebrides.

Few forms lie outside this chain. Aneityum *etman* is only superficially irregular, for by punctuating apart its formative elements we find in *e-tma-n* our *tama* theme with loss of the former vowel, which is characteristic of many of the Polynesian homogenies in that language. The *tata* of Malekula and Tangoan Santo and the *chacha* of Nengone appear to be the result of a terminal abrasion involving the final syllable and then a reduplication. There is *a priori* no reason why such a course should not have been followed by the former syllable as well as the later; we must note, however, that we find no evidence such as transition forms would afford in support thereof. If Baki *karama* stems with the *ma* type of *tamā* it involves a component *kara* as to which we lack information.

The Indonesian homogenetic forms are most largely of the transitional *ama* type, only Tobo *jaman* suggesting a *tama* possibility and in our ignorance of the source of this record *jaman* may be but a variant transcription

of Sanguir *yaman*. The still more dilapidated forms of *ma*, *mama*, and *mam* also appear.

From the Micronesian Pacific we record Gilbert Islands *táma* father, and in passing note that this archipelago has borrowed much from Samoa and in somewhat recent times; and Ponape *jam* father.

EFATÉ-VITI-POLYNESIAN-MALAY-SEMITIC.

218.

bwāka, a fence of stone or wood made for protection or fortification in war.

Samoa, Tonga, Niuē, Tahiti, Marquesas, Moriori: *pa*, a wall, fence, hedge. Maori: *pa*, a barricade, an obstruction, a fort, a stockade. Paumotu: *pa*, a rampart, bulwark. Rapanui: *pa*, a wall, to inclose. Hawaii, Mangareva: *pa*, a wall and its inclosure. Rarotonga: *pa*, an inclosure. Fotuna: *pa*, *kaupa*, a fence. Samoa: *'aupā*, a wall, fence, hedge, bulwark.

Viti: *mba*, a fish fence; *mbai*, a fence around a garden or a town, but not around a house.

Malo: *baba*, a fence. Tanna: *kaupa*, id. Eromanga: *nim-pa-t*, id.

Mabuiag: *pa* (plural *pal*), a fence for a garden, a stockade.

Malay: *pagar*, a fence, a railing; *palang*, a bar, a piece of wood laid crosswise in obstruction. Malagasy: *bako*, a pinfold; *bamba*, a wall or fence in fortification.

Hebrew: *ma'ākeh*, a parapet (surrounding a flat roof) to hinder one from falling off; *ākah*, to hold back, to hinder, to impede.

Our Polynesian, Viti, and Melanesian identifications deal only with a simple *pa* stem which exhibits but the slight normal *p*-variations. Efaté *bwāka* involves a new element which we are unable to identify, and the same is true of the Indonesian.

219.

bakauti, buti, to make an end, to finish.

Niuē: *oti*, all, entirely; *fakaoti*, together, to destroy utterly, to make a clean sweep. Maori: *oti*, finished, ended. Tahiti: *oti*, to be done, finished. Mangareva: *oti*, the end, finished, all over. Rarotonga: *oti*, finished. Paumotu: *fakaoti*, to finish, to conclude. Nukuoro: *hakaoti*, to end, to finish. Moriori: *hokoti*, to cause to cease. Nuguria: *huoti*, to finish. Sikayana: *oti*, all, to finish. Samoa: *talafa'aoti*, to tell all. Tonga: *oji*, to be finished, to be done, all gone. Fotuna: *oji*, all, the whole. Uvea: *fakaosi*, to finish.

Viti: *otia*, *vakaotia*, to finish, to bring to an end, to complete, to perfect; *oti*, finished, done, destroyed, utterly ruined.

Aneityum: *oti*, gone, done, finished.

Malagasy: cf. *oty*, picked off, gathered (of fruits), weaned.

Hebrew: *kašeh*, an end; *kašah*, to finish.

In Efaté *buti* I find an instance of the most degraded *faka-fa* stem, *b-uti*, paralleled by the similar *v*— shown in 214.

The identifications here offered are so patent that they need not detain us.

A particular interest of an ethnographic nature will attend our examination of the areas in which this homogeneity is found traceable. *Oti* seems to be a word of the Tongafiti swarm. It is found at the remotest beaches upon which broke that wave of migration. In the Nuclear Pacific we find it in Samoa, Tonga, Nukuoro, Uvea, Viti, and Niuē. In Samoa it has found a lodgment in but the one word cited. In the islands of the Western Verge we find it in Sikayana and Fotuna. In Melanesia it appears only in Efaté and Aneityum. Compare with this any of these records showing a word of the Proto-Samoan baggage; Melanesia is speckled with its occurrences. In this case we are at no loss to account for the Tongafiti word in Nuclear Polynesia, for we know that to have been a halting-place for the later swarm in the permanent home of the former. We know, too, that Samoa by a mighty effort cast off the invaders, and we are therefore not surprised to find so slight a remnant of the enemy's speech. The presence of this Tongafiti word in two of the islands of the Western Verge and in two of the New Hebrides calls for attention. The absence of Tongafiti homogenies in Melanesia indicates for that migration a different course in general, but such instances as this go to show that, while our conclusion is in the main true, now and then a small squadron may have found its way down the ancient track, or that when the second swarm was expelled from Nuclear Polynesia some of its fleets may have gone westward to homes where the chances of settlement were but slight.

220.

balo-ni, bano-li, balo-si, bĭlo-si, bulo-si, bulu-ngi, bulu-ni, bunu-li, to wash anything, to wash by rubbing. Cf. *bafano* 49.

Samoa: *fufulu, fulua*, to rub, to wash, to wipe; *fulunga*, the rubbing of a thing. Nukuoro: *fufulu, fulua*, to wash. Tonga, Futuna, Uvea: *fufulu*, to wash, to cleanse. Fotuna: *no-furuna*, to wipe.

Viti: *vuluvulu*, to wash the hands.

Malay: *basuh*, to wash. Malagasy: *uza*, id.

Arabic: *maṣa, mauṣ'*, to wash, to rub with the hands.

These Efaté forms are in a snarl which needs disentangling before we can give them precise study. We shall first examine the forms which exhibit the skeleton *b-l-n*. These are *baloni*, *buluni*, each being accompanied by a metathetic form, *banoli* and *bunuli* respectively. With the *b-l-n* skeleton I must include the slightly variant *bulungi*.

Another skeleton, *b-l-s*, occurs in *balosi*, *bĭlosi*, *bulosi*.

Dr. Macdonald's crossing of reference to *bafano* can only apply to the forms which I have preferred to regard as metathetic. If he regards them as principal, his identification with *fufulu* has no standing; and if he regards *baloni* as principal, his reference to *bafano* is irrelevant.

But neither *b-l-n* forms nor *b-l-s* forms can be properly identified with the *fulu* stem of Nuclear Polynesia, for that is an open stem. Yet in Fotuna *no-furuna* we find an *n* as to which we have no explanation in the jejunity of our only account of the grammar of that speech. It may be a formative suffix, even as we know the *no* to be a formative prefix. It may be the sole Polynesian survival of a *fulun* stem. It may be grafted upon

the open stem by attraction from a New Hebridean neighbor. If *fulun* be the Proto-Samoan stem its affiliates will be the *b-l-n* forms of Efaté. To associate therewith the *b-l-s* forms entails an *n-s* mutation of which we can not find a single trace in this material.

The Malay and the Semitic identifications do not come up for consideration at all.

221.

bwoa, nabwo, tamo, to emit odor; **bwon**, odor. Cf. 139.

Samoa: *poa*, a yam having a fragrant odor; *poapoā*, fishy smelling; *fa'apoa*, to feed young children with fish. Futuna: *poa*, *po'poa*, to smell fishy; *poa tai*, odor of the sea. Tonga: *boa*, the name of a species of yam, the smell of fish; *fakaboa*, to scent anything with fish, to smell of fish; *tauboa*, to scent the water with fish to catch others.

Viti: *mboi*, to emit an odor.

Malay: *bua*, odor. Malagasy: *fufuna*, id.

Arabic: *fāḥa*, *fāḥ'a*, to emit odor.

222.

but i, buti, futi, to pluck (as a fowl), to pluck out or up (as weeds); **mafuti**, to be plucked.

Samoa: *futi*, to pluck feathers or hair, to pull up weeds; *fufuti*, to haul in the fishing line. Futuna: *futi*, to pull out feathers or hair; *futitaula*, to raise the anchor. Niuē: *futi*, to draw up (as a fish on a line), to hoist (as a flag), to pluck (as a hair). Nukuoro: *futi*, to pick, to pluck. Sikayana: *ufuti*, to pull or haul. Tonga: *fufuji*, to pull, to stretch out; *fuji*, to pull, to pluck, to deplume. Maori: *huti*, *huhuti*, to hoist, to pull up out of the ground; *huti-ika*, to pull up a fish. Tahiti: *huti*, to pull or draw up a fishing line, to hoist a flag; *huhuti*, to pluck feathers, hair, grass. Marquesas: *huhuti*, to pull one another by the hair; *hutihuti*, to pull out the feathers of a bird, to pull the hair. Mangareva: *huhuti*, to pull up as by the roots; *hutihuti*, to pull up herbs, to pull out feathers; *uhuti*, to pull up by the roots. Paumotu: *hutihuti*, to denude the body of hair. Rapanui: *huhuti*, to weed; *hutihuti*, to pluck feathers. Hawaii: *huki*, to draw, to pull; *uhuki*, to pull up as grass or weeds.

Viti: *vutia*, to pluck feathers or hair, to pull up grass or weeds.

Mota: cf. *pit*, to take up or off with the tips of the fingers, to pick, to pluck.

Malay: *bantun*, to pluck, pull out.

Arabic: *namaṣa*, to pluck out, as hairs.

Because of its signification I collate Mota *pit*, yet with some hesitation because of the fact that in the study of some 150 Mota words homogenetic with Samoa this is the only instance of the *f-p* mutation. This objection rests upon this case rather than the broader knowledge of consonant movements in these languages, for *f-p* is a sufficiently well-established mutation in the true Polynesian and appears frequently in the Melanesian material here collated.

The Malay proposed in identification assumes without confirmation a stem of three consonants. The Arabic shows not the slightest resemblance save in meaning.

223.

fis i, fisi, fifis i, fif i, to bind around or about, to twine around or twist; *fifi*, to twine or go around, a fillet.

Samoa: *fisi*, to entwine, as a vine around a stick; *fa'afisi*, to entwine, to coil; *fifi*, the small intestines; *afi*, to do up in a bundle. Tonga: *fih*, thick, bushy, entangled; *fihifih*, curled in the grain. linked one into another, inextricable; *fifih*, one who in wrestling is dexterous with his limbs locking the limbs of his antagonist; *fi*, to plait, to twist, to curl; *fifi*, to enclose fish in plaited coconut leaf. Nuguria: *afi*, to wrap up. Futuna: *fifi*, a bundle of cooked fish. Niuē: *fi-ika*, a bunch of fish. Tahiti: *fifi*, entangled; *faafifi*, to entangle. Maori: *whiwhi*, twisted together; *whakawhiwhi*, to wind around; *whiwhiwhi*, the fat covering the intestines. Hawaii: *hihi*, the twining of vines; *hoohihia*, to entangle.

Viti: *vivi*, to roll up or around, to coil around.

Mota: *viv*, *vivis*, to wind around, to bind around and around.

Malay: *pusing*, to turn around, to twist. Malagasy: *fihina*, grasp, seizure, *fihitra*, a clutch, a grasp.

Hebrew: *habas'*, to bind, to bind on, to bind about.

In this group we are dealing with a stem **fis**, which may be expanded to *fisi* and which may be abraded to *fi*; see note 243.

In Polynesia we find only *fisi* and *fi*, in Viti only *fi*, in Efaté all three forms, and in Mota only *fi* and *fis*.

The Indonesian suggestions involve the difficulty of a third radical consonant which has left no vestige in our area; see also note 245.

The Hebrew likewise entails a third consonant in the root, differing from the Indonesian in being applied frontally.

224.

kamut i, ngamut i, kami, to take, to grasp with the fingers, to nip, to nip or cut with scissors; **kam**, native tongs (a split stick for grasping hot oven stones and lifting them); **kamkam**, scissors.

Tonga: *kamu*, to cut off anything round. Futuna: *kamu*, to cut, to shorten. Samoa: *'amu*, to cut off, as part of a beam.

Hawaii: *amu*, to shear or shave the hair from the head, to trim the hair.

Viti: *nggamu*, pincers, vise; *nggamuta*, to take hold of or hold with pincers or between the teeth.

Malay: *cubit*, *chubit*, to nip, to pinch. Java: *juwit*, id. Malay: *angkub*, tongs, nippers.

Hebrew: *kamas*, to squeeze together, to take with the hand; *kamaš*, to hold fast with the hand, to seize firmly; *kašas*, to contract, to shut (as the mouth); *kabaš*, to take or grasp with the hands. Arabic: *kabaša*, to take with the tips of the fingers; *kabaš'a*, to grasp with the hand.

The Proto-Samoan stem is manifestly **kamut**, yet the material is so scanty in Nuclear Polynesia that we can establish it only from Viti, and possibly from Hawaii *amuku* to cut short, which, however, Andrews associates with *muku* to cut, without pointing out or explaining the difficulties which such derivation entails.

225.

kar i, ngar i, karu-ti, ngaru-ti, to scratch; **karo i, ngaro i**, to scratch, to scrape, to shave, to seize; **tangaru**, to seize, to grasp.

Samoa: *'ili*, a rasp, a file, a saw. Tonga: *kili*, a saw; *kilijakamata*, a file; *kilijā*, to saw. Futuna: *kiliti*, to file; *kili*, a rasp, a file. Uvea: *kili*, id; *kilisi*, to file. Niuē: *kili*, a file, a saw.

Viti: *kari*, to scrape.

Melanesian: all meaning to scratch or scrape—Galavi: *giri, lagiri*.

Nada: *qiri*. Raqa: *kairi*. Wedau: *giai*. Mukawa: *giagiai*.

Kiriwina: *kuriqari*. Panaieti: *kurikuri*. Kubiri, Kiviri: *gagara*.

Oiun: *kakakara*. Motu: *hekagalo*. Taupota: *karakaroi*.

Wedau: *kakaroi*. Boniki: *kelologi*. Mota, Nggela: *karu*.

Bugotu: *g'ag'aru*. Wango: *karohi*. Malo: *garasi*.

Malay: *garis*, to scratch, to score; *garut*, to scratch, to scrape, to claw; *garok*, to scrape. Java: *garit*, to scratch, to score.

Arabic: *garra*, to drag, to snatch, to sweep, to seize. Hebrew: *garar*, to scrape, to sweep; *gara'*, to scratch, to scrape.

Dr. Macdonald has amassed a number of similar forms, there are many more than these in his dictionary, and we shall have to disentangle them.

The Proto-Samoan stem is **kilit**, and by a normal Polynesian mutation this becomes **kilis** in Uvea. This permits us to identify *karuti* and *ngaruti*. Thence we may pass to *karo* and *ngaro*, *kar* and *ngar*, so long as they carry the meaning to scratch, to scrape. Here we find the Viti *kari* to fit into the scheme; its form shows that it was not derived from the neighboring Polynesian *kili*, but came from the stem by way of Efaté. The Indonesian forms are in closer accord with Efaté and Viti than with the Nuclear Polynesia and give the impression of an earlier type.

It will be observed in the Efaté that while the scratch sense runs through all the forms the grasp sense is absent from those which exhibit the radical *t*. We may, therefore, judge that there are two stems interlaced, *karut-karo-kar* to scratch, and *karo-kar* to grasp, and that the reduction forms of *karut* have become involved with the *karo-kar* forms of the other stem. This will remove the Arabic identification entirely from consideration and will leave to the Hebrew but a partial resemblance.

226.

kau, a collection, bunch, herd.

Tonga: *kau*, plural sign. Futuna: *kau*, a multitude, a troop. Niuē:

kau, a troop, a company. Uvea: *kau*, a company, herd.

Mangareva: *kou*, a multitude (*kouika*, a shoal of fish). Samoa:

'au, a troop, a gang, a bunch, a cluster. Tahiti, Hawaii: *au*, collective plural.

Viti: *kau*, a bunch.

Malay: *kawan*, a herd, a troop.

Arabic: *gam'*, *gama'a*, a collection.

In view of the fact that *kau* retains its place in Nuclear Polynesia and has scantily entered the Tongafiti languages it will be interesting to cite Tregear's note (Maori Comparative Dictionary s.v. *tekau*):

It is evident that there was an original Polynesian word *kau*, a troop of persons, a cluster of things, etc. The Tongan *kauvaka*, a crew; *kaugane*, fellow-workmen; *kau-mea*, a companion; the Samoan *'au*, a bunch of bananas; a troop of warriors; *'aufale*, women living together in a house; the Tahitian *auono*, a large fleet or company of travelers; *autahua*, a company of priests; the Mangaian *kaunuku*, in groups, etc., all point to a word signifying collection, assemblage.

I can not see that the Arabic has aught to do with it.

227.

kinit i, nginit i, ngunut i, to nip with the fingers; **nakini na**, fingers (nippers), toes. Cf. 57.

Tonga: *kini*, to strike, to cut the hair short, to let blood; *kiniji*, to strike with anything light, to hit with a whip. Futuna: *kini*, *kikini*, to beat, to strike, to whip. Niuē: *kini*, to beat down (as bushes). Uvea: *kini*, to whip. Maori: *kini*, to nip, to pinch.

Samoa: *'ini*, to take hold of with the nails, to pinch, to pull up small weeds. Hawaii: *iniki*, to pinch with thumb and finger.

Viti: *kinita*, to nip, to pinch between finger and thumb.

Mota: *gin*, *ginit*, to nip, to pinch. Malekula Pangkumu: *kinji*, id.

Malay: *gântâs*, to break off, to nip off, to snap off.

Arabic: *karasa*, to nip with the fingers, to pinch, to snip off.

The Proto-Samoan stem is **kinit**.

The distribution of this word is striking. The nipping sense is found in Mota, Malekula, Efaté, Viti and Samoa, thence far north to Hawaii, far south to New Zealand; yet in Tonga, Futuna, Niuē and Uvea we find the word completely devoid of this sense and charged with a wholly different meaning which nowhere else appears. I find it quite inexplicable.

The Semitic has no relation other than that of sense.

228.

lua, lē, lai, to vomit, to put out the tongue (or anything), to flow out.

Samoa: *lua'i*, to spit out; *lulua*, to be sick, to vomit, to puke.

Tonga: *lua*, *lulua*, to vomit, to disgorge; *luaki*, to be sick with; *jakalua*, to nauseate. Futuna: *lulua*, *luaki*, to vomit; *jakalulua*, to nauseate. Niuē: *lua*, to vomit; *jakalua*, id.; *jakalue*, to spew out. Uvea: *lua*, to vomit. Fotuna: *noh-lua*, id.

Rapanui: *rua*, seasick, to vomit. Maori, Rarotonga, Nukuoro:

ruaki, to vomit. Paumotu: *ruaki*, to vomit, to eructate, to belch.

Tahiti: *ruai*, to vomit. Mangareva: *aruai*, *akaruta*, id.

Hawaii: *luai*, id. Marquesas: *uá*, *akaruta*, id.

Viti: *lu*, to run or leak out; *lua*, to vomit; *loloa*, qualmish, seasick.

Mota: *lua*, to spew. Malo: *lua*, id. Santo: *lulua*, id. Baki:

mjuluo, id. Malekula: *ru*, id. Aneityum: *a-lo*, id; *aluo*, *aluun*, to put out the tongue.

Malay: *luwat*, *luat*, to vomit; *luwar*, *luar*, out, away; *luwari*, *luwar-kan*, to put out, to expel. Malagasy: *lua*, to vomit; *mandua*, to vomit; *luatra*, over and above, taken up, put out; *manduatra*, to take out or up.

Arabic: *t'a't*, *ta'a*, *tai'at*, *t'a'at*, to vomit.

The Proto-Samoan stem is **lua**. The Mangarevan *akaruta* is quite singular, and, while not succeeding in identifying its primitive *ruta*, I can not admit it as a *lua* derivative. The same word *akaruta* cited by Tregear from the Marquesas is not found in Bishop Dordillon's dictionary.

The *lē* and *lai* of Efaté are profoundly degenerate forms if they be really of the *lua* stem. The most degenerate form in Melanesia is the *ru* of Malekula and the *ro* as a component of Aneityum *a-lo*. The discovery of these two forms in the sense to vomit gives a certain probability to the Viti *lu* in a sense which, while different, is not wholly irreconcilable with this stem. The Efaté sense "to put out the tongue (or anything)"—and I am free to acknowledge that I can not imagine what Dr. Macdonald means within the parentheses—finds support in Aneityum *aluo* and *aluun*, to put out the tongue, to thrust out the tongue, respectively. But the sense is only remotely, if at all, related to the stem sense of *lua*.

The Indonesian carries *lua* identifications with much extraneous matter. The value of the Semitic identification wholly fails to appear.

229.

ma i, to chew (softening food for an infant).

Samoa, Tonga, Futuna, Tahiti, Rapanui, Marquesas: *māmā*, to chew.

Niue: *māmā*, a mouthful, that which is chewed. Hawaii:

mama, to chew with a view to spit out of the mouth. Man-

gareva: *mama*, to chew, to bruise with the teeth. Nukuoro:

manga, to chew. Uvea: *maanga*, a morsel.

Viti: *mama*, to chew, used chiefly of the kava root.

Aneityum: *a-mai*, to chew (kava or any bark).

Malay: *mamah*, to chew.

Arabic: *ma''ma''a*, to chew meat, but not wholly.

230.

manga, maka, to open out, to gape, to wonder, to speak, to open the jaws; **mangamanga**, to gape often and rapidly, to pant, **manga**, a part of the names of places, as gorges and valleys, and especially of the abysses of Hades below Bokas.

Samoa: *manga*, a branch of anything forked, as a tree, river, road or fishhook; *mangamanga*, branched, forked; *fa'amanga*, to open the mouth, to gape; *fa'amangai*, to set astride. Tonga: *manga*, a branch of a tree, road, fishhook, stream, open, forked, spreading; *mangamanga*, to branch off, to spread open; *mananga*, to stride, to extend the legs; *fakamanga*, to open, to gape; *fakamangamanga*, to barb, to jag, to make forked. Futuna: *manga*, a branch, a fork; *fakamanga*, to have the legs spread out. Niue: *manga*, forked; *mangaua*, cloven; *fakamanga*, to open the mouth, to gape; *fakamamanga*, to straddle, to open the mouth, to spread out, to extend. Maori: *manga*, the branch of a tree or a river. Mangareva: *manga*, the branch of a tree, forked, cloven. Paumotu: *manga*, a branch, a division. Rapanui: *mangamanga*, a branch; *mangamanga rima*, a finger. Hawaii: *mana*, a branch, a limb, to branch out, to be divided. Marquesas: *mana*, a branch, as of a river. Tahiti: *maa*, cloven, divided; *amaa*, the branch of a tree.

Viti: *manga*, pudendum muliebre.

Mota: *manga*, an opening with lips, mouth, to open, to gape.

Malay: *mânga*, open; *mangah*, to pant, to palpitate; *nganga*, to gape.

Ethiopic: *naḳa'a*, to gape, to yawn, to be rent, parted, sundered; *nḳa'at*, an opening, gap, fissure. Arabic: *naḳa'a*, to rend asunder.

This forms an excellent and consistent series from Polynesia to Indonesia.

The Semitic identifications proposed by our author have not the least connection with the Polynesian *m-ng* root.

231.

mina, pleasant, nice.

Samoa; *mōmōna*, fat, rich (of pigeons and fish). Tonga: *momona*, fat (as shellfish). Futuna: *momona*, flesh of sea food. Maori: *momona*, fat, rich, fertile. Hawaii: *mona*, fat, rich, fertile, round, plump, the fat of an animal. Tahiti: *mona*, *momona*, sweet, delicious. Marquesas: *momona*, delicious, good to taste, fat part of an animal. Mangareva: *momona*, grease, fat. Paumotu: *momona*, odor, savor.

Viti: *mona*, brains.

Malagasy: *monamonany*, fat, plump, of a child or young animal.

Arabic: *'anik'*, pleasant, nice.

The Marquesas combines the two significations of fat meat and delicious. The meat sense runs through Samoa, Tonga, Futuna, Maori, Hawaii, Mangareva. In 142 we have seen a word beginning in oil and ending in brains; the Viti attains the same end from an equally greasy beginning. The Paumotu *momona* has undergone a particular and independent specialization. Taking a fresh start from the Marquesas and examining the sense of delicious we find that to be the only sense in Tahiti and Efaté; possibly it may be inferred in the rich of Samoa, Maori and Hawaii.

Again Dr. Macdonald's Semitic is not even a resemblance.

232.

mitei, breadfruit fermented and preserved. Cf. *mutrei* 6.

Samoa: *masi*, fermented breadfruit; *māti*, stale (of water, coconuts, kava). Futuna: *masi*, breadfruit or bananas fermented; *māti*, wilted and yellow, of leaves of tobacco and taro. Nukuoro: *masi*, bad-smelling. Tonga: *mahi*, sour, acid; *maji*, sour, decayed, as the nut when kept too long. Tahiti: *mahi*, breadfruit fermented. Mangareva: cf. *mahimahi*, cooked food kept until the next day to make it better.

Viti: *masimasia*, the breadfruit in a certain state.

Malay: *masin*, salt. Malagasy: *masimasina*, saltish.

Arabic: *māsi'*, salt (of water).

The alternative form *mutrei* I have (note 6) carried out to its Viti congener *mandrai*.

This form *mitei* we may adopt as related to the Polynesian *masi*, as set forth above. I have noted the Polynesian *māti* as being nearer *mitei* in form, but it clearly has no connection in sense. *Māti* carries the implication of being unfit to eat, and no Polynesian would think so ill of his *masi*, even though the odor is overpowering to Europeans and suggests the reflection that stale would be but a weak description. I am not quite confident

enough of the Nukuoro vocabulary to accept bad-smelling as the definition of *masi*, though it is fact none the less.

There is no physical fact in the fermentation of pounded breadfruit to enable us to connect it with the Indonesian and Semitic here proposed. The Malay *masin* finds its near relative in Nuclear Polynesian *masima* salt.

233.

sau, gentle breeze, cold air, as in the morning and evening.

Tonga: *haua*, to be exposed to the wind, to blow to and fro. Niuē: *hahau*, *hauhau*, cool. Maori: *hau*, wind, to be borne on the wind; *hauhau*, cool. Tahiti: *hahau*, to go aslant or beat in, as the rain driven by the wind into a house; *haumoe*, the cold night breezes of the valleys; *mehau*, wind; *puihauhau*, to blow gently, as a small breeze; *haumarū*, cool, grateful. Hawaii: *hau*, the name of the land breeze that blows at night, any cool breeze; *hauhau*, cool; *kehau*, the mountain breeze in the morning, a cold fine rain or mist. Marquesas: *tohau*, a gentle wind. Mangareva: *hau*, to blow gently. Rapanui: *hou*, breeze; *hahau*, *hauhau*, air, breeze; *hakahahau*, to expose to the air.

Viti: *thauthau*, the land breeze.

Malay: *hawa*, wind.

Hebrew: *nas'af*, to blow; *nes'ef*, the evening twilight when a colder gale blows, the morning twilight.

In discussing the *sau* stems which are involved in this and the next two items Mr. Tregear with truth remarks that it is difficult to segregate the several senses under proper headings since the significations all pass into one another. The only contribution toward the classification of the matter which I can offer is the note that *sau* dew belongs to a stem which is either **saut** or **saum** in Proto-Samoan, and that *sau* to cut derives from a stem in **sauf**. True, this will not avail much in the present stage of Polynesian with open stems, but it will serve as a safe guide so far as it may go in tracing out earlier affinities. The *sau* of wind and temperature seems to be from a primitive **sau**.

The Semitic identification offered is distinctly trilateral. Even were we to grant that the Hebrew *f* might become Polynesian *u* we are still left with an initial *n* upon our hands and unaccounted for.

234.

sau, the dew.

Samoa: *sau*, the dew; *sasau*, heavy dew; *fa'asau*, to bedew. Futuna: *sau*, the dew; *fakasau*, to expose to dew. Tonga: *hāhau*, dew, mist; *haujia*, *hauhau*, wet with dew. Niuē: *hahau*, dew; *haumia*, bedewed. Uvea: *hahau*, dew. Maori: *hau*, *haurutu*, *hauku*, *haunui*, dew; *haumaku*, *hautaku*, bedewed, wet. Tahiti: *hau*, dew; *tahau*, to bleach clothes in the dew of the morning; *tiohau*, to bleach in the dew; *tochaumi*, soft or damp as by dew. Hawaii: *hau*, cold dew. Mangareva: *hau*, *au*, dew. Rapanui, Marquesas: *hau*, id. Rarotonga: *au*, dew.

Viti: *sasau*, dew.

Malagasy: *andu*, dew.

Arabic: *nada'* (for *nadau*), dew.

The Proto-Samoan **saut** rests upon protected forms in Samoa, Tonga, and Maori. The stem **saum** in the same sense is preserved in Niuē, Tahiti, and Maori. I can find no evidence of the interchange of *t* and *m* except the apparent instance in 217, which, as there shown, is susceptible of a far simpler explanation.

The Viti *sasau* is a dialect form, the Bau using *tengu* and *mbite*, but with *sau* appearing in Efaté it is not necessary to consider *sasau* a recent acquisition from the Tongan.

The Malagasy and Arabic might better be offered as homogenetic with dew itself than with *saum* and *saut*.

235.

sau-fi, to scoop or shave the surface off water; to cut or shave off the surface of wood; **sau-baba**, an adze, to strip off, to peel off (as clothes).

Samoa: *sasau*, a large axe; *sau-papa*, *sāu-papa*, to cut off the outer part of a log of wood to make it level and even; *sau-fono*, to cut planks for a canoe; *sautasi*, one wide plank of a canoe. Tonga: *hahau*, to adze, to chip logs of wood square. Maori: *hau*, *hauhau*, *hahau*, to hew, to chop. Tahiti: *hauhau*, to take off the first chips in hollowing a tree. Hawaii: *hahau*, to hew stones.

Viti: *sautha*, to cut (as bamboos, reeds), to break a coconut for drinking (by cracking off a piece at the tip).

Malagasy: *sauka*, *saukina*, to scoop out (of water), to draw water.

Hebrew: *s'a'ab*, to draw water. The primary idea lies in the raking off the surface, *saḥaf*, to sweep, to scrape off, *ḥasaf*, to strip off.

Arabic: *saḥafa*, to scrape, peel or rub off, to shave.

My recognition of a Proto-Samoan **sauf** is based upon the Efaté, for our Polynesian is scanty and affords us no protected forms from which the stem might be revealed. I recognize that this stem does not seem to apply to the Viti, but that is in sense a doubtful identification.

The first of Dr. Macdonald's definitions of *saufi* is a treasure; it surely was first drafted by one of the Danaids in her aquatic employment. The reason for its presence in the Efaté dictionary will, of course, be found in the Semitic suggestion. The true signification is to hew with the adze, and it is only in the Maori that this sense is not made to appear in the definition. This stamps the Viti identification as inconsistent.

The Malagasy has not the Polynesian sense, but it does accord with the Efaté scooping of water.

236.

tau-ngi, to grasp firmly with the hand, to pluck off with the hand (as fruit).

Samoa: *tau*, to pluck fruit with the hand; *tāu*, to press out (as juice), to milk. Tonga: *tau*, to squeeze or wring out. Futuna: *tau*, *ta-tau*, to squeeze, to express. Niuē: *tau*, to gather gardenias; *tatau*, to wring, to strain, to press out. Uvea: *tatau*, to press; *taui*, to pluck. Maori: *tatau*, to squeeze, to express juice. Fotuna: *ko-tauia*, to wring, to express.

Viti: *taura*, to take hold of.

Malay: *sambut*, to lay hold of. Malagasy: *sambutra*, id.

Hebrew: *ṣabat*, to grasp, to lay hold of firmly, to seize, to pluck.

Arabic: *ṣ'abaṭa*, *ṣ'abat'a*, id.

It is impossible to see how the Indonesian and the Semitic, though there is a superficial resemblance between them, can have anything to do with the Efaté and Polynesian of this item.

237.

tula, earwax.

Maori, Tahiti: *taturi*, earwax. Mangareva: *teturi*, id. Paumotu: *katuri*, id. Hawaii: *kokuli*, id. Fotuna: *turituru*, id. Marquesas: *tetui*, id.

Viti: *tule*, *ndule*, earwax.

Baki: *tiro*, earwax. Mota: *tul*, id.

Malay: *chulik*, to clear the ears of wax. Bicol: *tuli*, earwax.

Arabic: *ṣalah*, deafness.

Because of the fact that the island diagnosticians regard cerumen as the sole cause of deafness and in their practice of medicine not infrequently produce deafness by their exploratory excavation of the ear, and because of the intimate association of this stem with the most common word for deafness, I include the latter for the extension of this record.

Samoa: *tuli*, *talingatuli*, deaf. Tonga: *tuli*, id. Futuna: *tuli-tuli*, id. Uvea: *tuli*, id. Niuē: *talingatuli*, id. Hawaii: *kuli*, id. Tahiti: *turi*, *taturi*, id. Maori: *turi*, id. Marquesas: *tui*, to disobey, to turn a deaf ear; *haātetui*, to turn a deaf ear; *putui*, deaf, disobedient; *haāputui*, to turn a deaf ear. Rarotonga: *turi*, deaf. Mangareva: *turi*, noise. Paumotu: *taringaturi*, disobedient. Fotuna: *eturitura*, deaf. Nuguria: *tarina-turi*, id.

Viti: *ndalingatule*, deaf.

Motu: *tuia*, to quiet.

Malay: *tuli*, deaf. Matu: *turang*, id.

From this it appears that in the very center of Nuclear Polynesia *tuli* means deaf, yet that the sense is more precisely conveyed by joining with it the organ affected, *talinga* being, of course, the outer ear, which is as far as their knowledge of aural anatomy goes. This composite is the only means of recording deafness in Niuē, which has not retained the *tuli*-stem in independent existence. It is the only means in Polynesian Viti (for it has a Melanesian term, *ndindivara*), which retains *tule* (*ndule*) for the cerumen. In Samoa both *talingatuli* and *tuli* exist side by side in the same sense. In the remotest Polynesia of all, the Paumotu, an archipelago of linguistic problem, the word exists in a tropical sense only. But the rest of Polynesia expresses its deafness satisfactorily by *tuli*, and we find the word in Indonesia and possibly in Motu.

Now if we regard the employment of *tuli* for cerumen we shall note that such use extends from Indonesia into Viti. Of Nuclear Polynesia we can not speak with greater precision than to say that all our dictionaries have omitted this sense in defining *tuli*; at the same time they have neglected to define cerumen at all. But in all eastward Polynesia, the lands of the Tongafiti swarm, it is necessary to reinforce *tuli* with another element in differentiation from the sense of deafness. This element stems the same throughout this second migration, subject to the normal variation. It is *ta*

in Maori and Tahiti, *ka* in the Paumotu, *ko* in Hawaii, *te* in Mangareva and the Marquesas. That it was brought by this migration from its western home is shown by this uniformity, and it is in use wherever that migration has reached. It is so ancient that no trace of its original significance can now be discovered.

By combining these two records we find:

(1) The Proto-Samoans used *tuli* to mean the visible physical obstruction of the ear, and to convey the sense of deafness they employed a locution signifying waxed-ear.

(2) The Tongafiti when their migration swarmed had reached a stage in which *tuli* had lost its primal sense, was altogether used of deafness, and to convey the cerumen meaning a compound was necessary.

(3) Nuclear Polynesia, being a meeting-ground of the two migrations, shows the record of the earlier overlaid by the later.

The use in Fotuna of the *tuli*-cerumen and *tuli*-deaf is one of the interesting pieces of evidence to show that the squadron which settled that verge island had been in the area where the Proto-Samoan and Tongafiti swarms had been in conjunction, and that the period of its voyage must have been subsequent to the coming of the Tongafiti fleets to Nuclear Polynesia.

238.

uta i, uta ki, to load (to make sink, to immerse) a canoe; *uta*, a canoe load, a cargo.

Samoa: *uta*, the cargo, the load of a boat, ship or canoe. Tonga: *uta*, the cargo or freight of a vessel. Uvea: *uuta*, to fill up. Futuna: *uta*, cargo, lading. Maori: *uta*, to put on board a canoe, to freight, to load; *utanga*, cargo, lading. Mangareva: *uta*, to carry by sea to land or by sea to another country; *utanga*, a big loading or freight. Marquesas: *uta*, to carry, to transport; *utatina*, *utaia*, cargo. Paumotu: *utanga*, baggage, burden, freight, the lading of a ship. Rapanui: *hakauta*, to give passage. Tahiti: *utaa*, the burden or load of vessel. Hawaii: *ukana*, baggage on or to be put on a canoe or vessel; *hoouka*, to freight, to put aboard a canoe. Fotuna: *auta*, cargo; *fakaute*, to load.

Viti: *usana*, *usā*, to convey a cargo; *usana*, *usausa*, a cargo.

Tanna: (t) *auuta*, to load; *nauuta*, cargo,

Malagasy: *undrana*, to load a canoe.

Arabic: "āḷa ("a'tu), to immerse.

There is no evidence to show that this is other than an open stem, yet Dr. Macdonald joins it with *utu* (168), of which the stem is demonstrably *utuf*, and derives both from a Semitic parent of an Arabic word meaning to immerse. In clinching the identification he so defines this *uta* as to lose all sight of common sense. The one aim of the Efaté stevedore and of the lumpers aboard the greatest cargo tramp that ever steamed away from the Broomielaw is so to stow the lading of his canoe, of their whaleback, as to preclude all risk that he shall "make it to sink or immerse." Does not the man know that in the days when shipmen had the piety that fears the sea all ships' papers, after reciting the cargo, wound up with the prayer, at least the formula, "and so may God send the good ship safe deliverance"?

"To load," he says, "to make sink, to immerse," and all because the Arabians of the nights use for immerse a word which he thinks to look like *uta*.

The word, belonging to both migration swarms, is practically one from Melanesia to the Paumotu, both in form and in sense. Very little, therefore, calls for comment. In the Marquesas *utatina* involves the termination *tina* peculiar to that language, but which has the same function as the common *nga* or *na* wherewith nouns are formed from verbs. Our Uvea dictionary is very jejune, but there can be no doubt that *uta* has the characteristic cargo sense. In Viti we encounter the *t-s* mutation, which is by no means unusual in that speech and will be found elsewhere in Melanesia. The Malagasy has the usual distortion of the resemblance of the words in that language which stem upon the Polynesian.

EFATE-MELANESIAN-POLYNESIAN-MALAY-SEMITIC.

239.

asua, to smoke.

Samoa: *asu*, smoke. Nuguria: *ohu*, thin smoke; *au*, thick smoke. Nukuoro: *asu*, smoke. Rotumā: *aasu*, *osu*, id. Tonga, Niuē, Uvea: *ahu*, id. Futuna: *àfu*, id. Maori: *au*, *auahi*, id. Tahiti: *au*, smoke, vapor; *au auahi*, smoke; *auahi*, fire. Mangareva: *au*, cloudy mist on the ocean; *ahu*, mist, cloud; *auahi*, smoke. Marquesas: *auahi*, smoke, vapor. Rapanui: *au*, *auahi*, steam, vapor. Hawaii: *uahi*, a cloud, a vaporous appearance. Rarotonga: *auai*, smoke.

Moānus: *kāsu*, *kāsūmoan* (moan, fire), smoke. Sariba, Panaieti, Mukawa: *kasu*, id. Awalama: *bogahu*, id. Malekula Aulua: *basua*, id. Galavi: *basu*, id. Taupota: *bahubahu*, id. Wedau, Boniki: *bau*, id. Motu: *qalahu*, id. Nifilole: *nggasi*, id. Ulawa, Bululaha: *sasu*, id. Alite: *rasu*, id. Malo, Tangoan Santo, Maewo, Merlav, Gog, Mota, Wango, Fagani, Suau, Dobu: *asu*, id. Sesake: *asua*, id. Savo: *azuazu*, id. Mosin: *as*, id. Mafoor (New Guinea): *aas*, id. Malekula Pangkumu: *ese*, id. Ambrym: *walehi*, id. Vuras: *es*, id. Sasar, Alo Teqel, Pak: *os*, id. Santo: *osun*, id. Nggao: *ngganggahu*, id. Bugotu, Nggela, Omba: *ahu*, id. Motlav, Volow, Arag: *aho*, id. Lakon: *ahau av*, id. Lo: *hiev*, id. Roro: *hiavu*, id. Norbarbar: *ah*, *suio*, id. Buka: *uruhu*, *orru*, id. Nada, Murua: *museu*, id. Kiriwina: *umseu*, id.

Malay: *asāp*, smoke. Malagasy: *etuna*, id.

Hebrew: *‘as’ēn*, *‘as’an*, to smoke. Arabic: *‘at’ana*, id.

As between the two migrations we observe that the Tongafiti has undergone a loss of the consonant element. Our Melanesian homogenetic forms are numerous and widely placed; we shall have to examine several considerable changes, but in not a single instance do we find this central consonant obliterated.

When we look more closely into the Tongafiti languages we shall see that *au* has not only lost the radical *s*; it has scarcely succeeded in retaining the recollection of its own meaning. Mangareva is the only Tongafiti speech which recalls the consonant, in *ahu*, and this is paralleled by *au*; and both have gone so far away from the brands of the fire as to mean no more than

any vapor. Maori and Tahiti are the only languages in which *au* means smoke; in each it means vapor in general, each employs more freely a definitive compound, and Maori has several other words for smoke. Having expanded in signification to mean vapor in general, the only way in which it was possible to make it plain when smoke alone was meant by *au* was to make the definitive compound fire-vapor *auahi*. This we find in Maori, in Mangareva, in Rarotonga to mean smoke. In the Marquesas this too means vapor as well. By an odd mischance in Tahiti *auahi* passed from the smoke to the fire itself, and to designate smoke it became necessary to cry back once more to *au* and devise *au auahi*. We have seen that in the Marquesas *auahi* means vapor as well. Passing thence to Hawaii we find that *auahi* has lost even the memory of the fire and it has broken down in form to *uahi*, used of any vapor. Judge Andrews, ignorant of the life history of the word, etymologizes this—no other description so fits—as *u* ooze or milk, and *ahi* fire; unfortunately the author of the very respectable Hawaiian dictionary was no philologist. It is proper to note that in Emerson's English-Hawaiian dictionary (1845) smoke is defined as *uahi*.

In Nuclear Polynesia *asu* carries the vapor idea as well. Samoa differentiates by the use of the primitive for smoke and the conduplicate *asuasu* for haze and mist; as is commonly the sense of conduplication forms, it is intensive. Futuna employs *ʻāfu* for both. In this area no matter of form change need engage our attention except this of Futuna. It is a particularly interesting case, one with a story to tell.

We have in the material here assembled no record of an *s-f* mutation; in my more extended studies in Polynesia I have encountered no other instance and but two which are at all near it. We know that the Samoan has the primal form *asu*. The normal mutation is to *h*, and thus we have *ahu* in Tonga, Niuē, and Uvea. But Futuna has no aspiration and it does possess the sibilant. Now if Samoan users of the word had carried it to Futuna, Uvea would have learned to say *asu*. From the Futuna *ʻāfu* we see that the word came to them in the *ahu* form. Our charts will show us that of the three languages which use *ahu* Uvea lies almost within sound. But Uvea uses both *s* and *h*. If *asu* had come to Uvea from Samoa *asu* it would have remained; that it is *ahu* shows that it came to Uvea from some language in which *ahu* was the form, and, having the aspirate, Uvea was under no compulsion to change the form which it received. But Futuna had to provide some way of dealing with the inconvenient or disagreeable *h*. In Polynesia *h* is a mutation result from *s* and from *f*. For some reason Futuna felt the impulse to work back from *h* to *f* instead of to *s*, which was all wrong, but, like all error, the more picturesque it is the better does it teach. Now the line is sharply drawn between the *s-h* and the *f-h* mutations; *s-h* is general in Polynesia; *f-h* occurs only between the Proto-Samoan and certain of the Tongafiti tongues. If, then, Futuna interprets the *h* which is brought to it in terms of *f* it can only be that the Futuna folk have the Tongafiti *Sprachegeist*, in other words that they are a Tongafiti folk left behind on their exiguous two islands when the swarm of their fellows swept along to distant discovery. At the beginning of this excursus I mentioned two instances of a near mutation. They involve Samoan *salo* to rasp (Tonga-Niuē *halu*) Viti *varo*, Samoan *sele* to snare Tonga *hele* Viti *vere*.

We have already seen that the Tongafiti folk have found it necessary to particularize smoke as fire-vapor. The same usage is found, though far less commonly, in Melanesia. We have in Moánu*s kasumoan*, in which *moan* is fire although by no means of our *ahi*-fire stem; Lakon *ahau av* and Lo *hiev* are clearly homogenetic with *auahi*; but these are all.

The stem *asu* we find intact in a considerable group of languages in the New Hebrides and two in the southern Solomons. This stem is altered by frontal accretion of three palatals in Moánu*s*, Nifilole, and Nggao, severally too remote to be regarded as local interinfluence; of two linguals in Ulawa-Bululaha and Alite, which only once more in all our material, *sa* (337) bad Tanna *ra*, are found interchanging; of one labial. I note Codrington's opinion that "Nggao *ngganggahu* is the Mota *gagavu* thick, clouded." But is it? Moánu*s kasu* is nearer phonologically and far nearer in the migration track, for a derivation from Mota to the Solomons is an upstream movement and against the current. I do not incline to regard this frontal accretion as a Melanesian device; it seems more reasonable to look upon it as the remnant of an earlier stem form, but what that earlier and now vanished radical initial may have been we may not seek to know.

Savo shows *asu* with the slight change from surd to sonant. Two languages in the Solomons and one in the New Hebrides have *asu* with equally slight change from sibilant to aspirate. Motlav, Volow and Arag, all in the New Hebrides, carry the change a small step farther by the alteration of the final vowel. A step beyond in the change of the final vowel brings us to Lakon. Efaté and Sesake have the *asu* stem unchanged save for the terminal accretion of the vowel *a*.

Thus far we have kept close to the primal form. Now, while holding fast to the *s*, we are to find a greater vowel change in Malekula Pangkumu *ese* and one which sacrifices the differentiation of the two vowels which has hitherto been found to persist. To this branch of the stem belongs the Vuras *es*. With it I have included Ambrym *walehi* provisionally; the *ehi* can not be a mutant of *afi* fire, for that is *av* in Ambrym; I have thought it possible that *ehi* is a further mutant upon *ese*, and *wal* is as yet unaccountable. Santo *osun* with a terminal accretion introduces the *o*-branch which will be noticed in Rotumā as well and in three of the Vanua Lava languages with terminal abrasion. Norbarbar shows in one of its forms a terminal abrasion deriving from either *ahu* or *aho*, but probably the former. Lo suggests in *hi* a frontal abrasion, and that principle may also account for a part of the second Norbarbar form *suio*. One Buka form, *uruhu*, quite plainly suggests in *uhu* another vowel change of *asu*, leaving *ur* unaccountable yet somewhat smacking of *wal* in Ambrym *walehi*, or perhaps in these words *ruhu* and *lehi* are akin to Alite *rasu*; the second Buka form is manifestly a devolution form from the former.

In the Malay *asâp* we recur to the definitive compound of the Tongafiti, *as-âp*, in which the latter component is again *afi* fire. The Malagasy seems like an *asu* derivative.

In the Semitic there is seen the initial palatal which appears here in Melanesian, the former vowel is the same, the *s* is present, and the final *n* is found once at least in Melanesia. So far as this one stem is concerned the resemblance is striking.

240.

ae, interjection of surprise, commiseration.

Samoa: *auē*, alas, oh (wonder). Niuē: *auē*, alas. Maori: *ae*, alas (surprise). Hawaii: *ae*, *auwe*, alas. Mangareva: *ae*, alas (surprise and grief). Tahiti, Rarotonga, Paumotu: *ae*, alas. Tongarewa: *awai*, id. Tonga: *oiaue*, alas. Aniwa: *kawe*, alas. Futuna: *uei*, alas (indignation, surprise). Marquesas: *ae*, *ue* (surprise). Fotuna: *awé*, alas. Rapanui: *ae*, *aueue*, *ue*, alas. Aneityum: *awé*, *auwé*, *iyauwe*, alas. Nguna: *ai*, id. Mota: *awa*, id. Eromanga: *uwe*, id. Tanna Weasisi: *awé*, id. Bierian, Baki: *awa*, id. Malay: *ahi*, *ayi*, *ayue*, alas. Arabic: *awwi*, alas.

It is a sure identification from the Paumotu through all Polynesia, through all Melanesia, through all Indonesia, and to the Semitic if one so will. And to the cow, if one so will, for I have caught it in the calf-call of lowing kine. And why should it not be identifiable, for the word lacks all the elements of strength which part the word from the cry? There is not a consonant anywhere in it, for the *w* is no more than a matter of transcription; it might just as well be *u*. Only in Aniwa do we find a consonant, the deepest palatal and initial at that. To me it seems no more present than is the initial *m* in the moo of cattle, a mere appulse.

What is this cry which our primitive islanders share with the animals? Look at its elements, all full-throated. First we have *ā*, the sound of mouth open, fauces open, lungs full of air. As air expires the sound recedes in the mouth toward the palate and we find the *u*. Last comes the conscious finish of the utterance, the muscles begin to retract, the sound-making point is forced forward and the sound is *e*. If the man had but a few more cubic centimeters of lung capacity he could attain cow volume for his cry, or interjection, since it amounts to the same thing.

241.

bwala, **bwela**, **bwola**, to incline to, to be close to, to be stuck.

Samoa: *pili*, to be near, to approach, to be caught, entangled. Niuē: *pili*, to stick together. Hawaii: *pili*, near, close, to stick together. Maori: *piri*, to stick; *pipiri*, to be close together. Tahiti: *piri*, to be squeezed or confined close. Rarotonga: *piri*, to stick together; *akapiripiri*, to get near. Mangareva: *piri*, to stick together; *akapiri*, to patch, to glue. Paumotu: *piripiri*, glue; *jakapiri*, to adhere. Rapanui: *piri iho*, to devote oneself to; *pipiri*, glue, gum, sticky; *hakapiri*, to join to. Marquesas: *pui*, to be joined together, to stick.

Motu: *hebiriebirie*, to sit or stand close together, as trees standing close together; *hebirimate*, to be squeezed, crowded. Mota: *kpwir*, to be close together; *vakpwirkpwir*, to crowd together. Aneityum: *bili*, promiscuously.

Malay: *ampiri*, to bring near to; *ambir*, near, nigh.

Arabic: *māla*, *mayl'*, to incline, bend, or lean to, to be close or near.

The identifications here in Polynesia, Melanesia, and Indonesia are closer than the Efaté, yet that is not so far away as to be excluded. It will be noticed that the places in which these Melanesian identifications appear—Motu, Mota, New Hebrides—are those which go to establish the Viti track which I have proposed as one of the migration courses.

In the Malay words the *pili* stem is recognizable in company with a formative element. The *m* is manifestly not associable with *piri-bir*.

It must be upon these Malay words as transition forms that our author relies in passing to his Arabic. This lacks permissibility.

242.

bwinu, bwin, bōngě, to whistle.

Samoa: *vivini*, to crow. Futuna: *vini, vinivini*, to utter a cry of alarm, of distress or of joy. Mangareva: *vinivini*, a soft sound, musical, music. Paumotu: *vinivini*, the cry of a baby, to chirp, to warble; *hakavinivini*, to whistle, to hiss at.

Malekula Pangkumu and Uripiv: *puinpuin, winwin*, to whistle. Ambrym: *mofin*, id.

Malagasy: *enu, nenu, manenu*, to sound, to crow, to ring, to sing.

Arabic: *ma'ānu*, a singer; "*aniya*, to sing, to coo; "*ina*, song.

Hebrew: '*anah*, to sing.

As to the homology of *v-bm-ḫu* see note 84 dealing with Efaté *bu*. The dialectic form *bōngě* does not seem such that we may include it.

The word is singularly rare in its distribution. The Malagasy can not properly be included in the identification, and the Semitic with its deepest guttural for an initial is far remote from the island stem.

243.

bir i, to plait a string or rope.

Samoa, Futuna, Niuē: *fili*, to plait, to braid, to twist. Tahiti: *firi*, id.

Maori: *whiri*, id. Mangareva: *hiri*, id. Hawaii: *hili*, id.

Mangaia: *iri*, id. Tonga: *fi*, id. Marquesas: *fi*, to twist.

Solomon Islands: *fili*, a rope. Motu: *hilia*, to twist round and round. Mota: *vir*, to twist, to wring, to squeeze with a twist, to plait.

Malay: *pintal*, to twist. Beu: *pilin*, id. Batavia: *bilan*, id.

Arabic: *fatala, fall'*, to twist, to spin. Ethiopic: *fatlat*, id.

In the Tongan *fi* here included because of identity of signification we encounter a form anomalous in the vanishing of the second of the stem syllables. In *fisi* (223) it will be observed that a similar loss is observed in Futuna, Niuē, Viti, and the Tongafiti identifications. If in this light we examine the Mota identification of that group, *vivi, vivis*, it may be proper to separate them, *vivis* to go with the *fisi* stem, and *viv* to go (as abraded *vivi*) with a *fi* stem. To that would also belong the Efaté *fij i* and probably the Samoan.

The remaining identifications are satisfactory, excluding Malay *pintal*, until we reach the Semitic. This involves the trilateral **ftl**. To link this with the *fili* stem requires that we account for the loss of *t* without having left a transition form anywhere along the line, all the more difficult to account for since, being centrally situated, it is protected from the common casualties.

244.

boro-aki, biro-aki, bero-aki, baro-aki, to bequeath to or order to do (by will when dying), to commission (one to do something), to give orders to.

Samoa: *poloa'i*, to send a message to, to command a person at a distance, to leave commands, as when going a journey or dying.

Futuna: *poloaki*, to order, to command, to bid farewell. (Niuē: *poaki, puaki*, to command. Tonga: *boboaki*, to send a message.)

Hawaii: *poloai*, to send orders for one to come. Maori: *poroaki*, to leave instructions when departing, to take leave. Ma-

ngareva: *poroaki*, to command, to order. Marquesas: *poóái, poóhaki*, to command, to entreat. Tahiti: *poroi*, a direction

given, a charge, to take leave. Mangaia: *poro*, last words.

Matupit: *bor*, to shout at, to scold harshly.

Malay: *pâsân*, to commission, to enjoin. Malagasy: *hafatra*, a will or testament, order.

Arabic: *wasa'*, to bequeath by will, to command, to enjoin.

The stem is **polo**.

This is seen in a radical signification in Mangaia, the only case in which the noun has been preserved. This sense of the last words, or, in the verb, to impart dying injunctions, has as much importance to the Polynesians as police attach to ante-mortem statements, a fetish in the performance of their peculiar functions. He dies well in the Pacific who, upon fine mats and with the members of his family seated gravely about him, can divide among his kin not his possessions, for those are largely communal, but the functions in life upon the successful performance of which he can look back with pleased gratification.

This is so concrete an act that I incline to the belief that it is the gravely underlying sense of the word. It is found as noun in Mangaia, as verb in Samoa, where, however, the particular sense is in modern usage more definitely expressed in *fa'amavaenga* or parting words. A secondary sense, as the word broke down, was to cover the farewell of any parting; this in Samoa, Futuna, Maori and Tahiti. Next, with the idea still persisting of the inexorability of the death-bed injunction, the word weakens still further into the sense of a command; this in Futuna, Mangareva, Tahiti and the Marquesas, and, disregarding now the form anomaly, in Tonga and Niuē. All these languages have other words meaning to command. That this command differs from other orders is felt in all these tongues; it is definitely expressed in Samoa "to command a person at a distance" and the tantamount Hawaiian.

Except for Efáté we do not find the stem in Melanesia. I have included the Matupit form from New Britain because of its form resemblance; the sense is so far awry as to make the identification quite doubtful.

In Efáté and Polynesia, excepting Tahiti and Mangaia, we find that the word has spread in its most highly finished form. In general the Polynesian verbs in *-aki* impress me as a most modern development. The diffusion of this one shows that it must have existed in this form at the time of the expulsion of the Tongafiti swarm from Samoa. The form in Niuē and

Tonga is anomalous; we do not often find the excision in Polynesian of a whole root syllable; yet the sense and the identity of the remnant seem to prove these forms of the *polo* stem.

Backward of Efaté, save the Matupit resemblance, I recognize no identification.

245.

bwosi, to twist (a rope).

Samoa: *fusi*, a belt, a girdle, to tie, to bind, to gird, to clasp, to embrace. Tonga: *fuhi*, to fasten on. Niuë: *fuhi*, a bunch, to tie together. Uvea: *fihu*, to tie. Hawaii: *hui*, a bunch, a cluster. Mangareva: *huhui*, a tied-up bundle of fruit, a cluster, a bunch.

Viti: *vusi*, to suspend by a loop, to fasten, to tie up.

Nengone: *wose*, to bind; *nawose*, a band.

Malay: *pusing*, to twist, to turn round.

Arabic: *'afasa*, to twist.

Because Dr. Macdonald has identified *bwosi* with *fusi* I have here expanded the ramifications of that stem, the more particularly as it has Melanesian affiliations. Yet I do not by any means accept the initial identification. Principally from the sense I regard *bwosi* as homogenetic with *fisi* (223); and the form variety is no more than we find in other Efaté identifications which we are quite ready to accept as valid.

Of Polynesian *fusi* we are to note that it is wholly Nuclear Polynesian, the Uvea variant being readily resolvable as metathetic of the 1432 type. This *fusi* we find in Viti, Nengone, and Malay. The Arabic is a trilateral, *'fs*, and we can not account for the sacrifice of the initial.

The Hawaiian and Mangareva forms I have expressly included in order that I might clarify a Niuë peculiarity. They are not of the *fusi* stem; their stem is *fui*, so found in Samoa and in the Polynesian of each migration swarm. Niuë *fuhi* is of the *fusi* stem in the sense of tying; to the cluster (*fui*) sense it has assigned the *fusi* stem. This I can not regard as a transition form between the two stems, for neither *s* nor *h* undergoes extinction in passing from Samoa to Niuë. I take it as simply a Niuë blunder. That such blunders may happen I have already made sufficiently clear in Futuna *afu* (239).

Dr. Macdonald equally identifies the Malay *pusing* with *fisi* (223).

246.

buma, funga, to flower, to blossom.

Samoa: *funga*, a flower, a blossom. Nukuoro: *hunga*, a flower.

Sesake: *vunga*, a blossom, a berry. Malekula Pangkumu: *pung*, to blossom.

Malay: *bunga*, flower, blossom. Malagasy: *vuni*, flower; *mamuni*, to blossom.

Arabic: *fukah*, flower.

It is impossible to avoid the impression that there lies somewhere a connection between this relatively infrequent word and the widespread *fua* (360) fruit. The consideration of this stem, therefore, will be involved, so far as may be fitting, in the discussion of that item.

247.

buto, the navel.Samoa: *pute*, the navel.

Tangoan Santo, Lambell, Lamassa: *buto*, the navel. New Ireland (Carteret Harbor): *buta*, id. New Ireland (Duffield): *ambutang*, id. Laur, Pala, King, Malo: *bito*, id. Malekula Pangkumu: *bitou*, id. Baki: *burimbuto*, id. Buka: *vuso*, *bussusse*, id. Mota: *putoi*, id. Tanna: *nu-puti*, id. Tagula: *bibido*. Roro: *botoa*. Kabadi: *puko*. Mekeo: *fuko*. Motu: *udo*. Pokau: *mudo*. Mukawa: *puso*. Suau: *uso*. Tubetube: *pusua*. Awalama: *buhoho*. Wedau: *buo*. Nada, Murua: *poso*. Sariba: *posi*. Mugula: *poasi*. Panaieti, Misima: *pohu*. Hula: *buro*. Rubi, Keapara, Galoma: *bulo*. Sinaugoro: *ulo*. Malay: *pusat*, the navel. Malagasy: *fuitra*, id. Arabic: *bugrat*, the navel, a knob.

With this should be included the general Polynesian *pito* navel. Samoa, which has *pute* for navel, uses *pito* only in the sense of the end of a thing and *pītopīto* for anus, this apparently for modesty's sake in preference over *pū*.

Maori: *pito*, navel, end. Tahiti: *pito*, navel, navel string; *pitoraoere*, the ends of a leaf surround in fishing. Marquesas: *pito*, navel, navel string, end. Mangaia: *pito*, navel string. Mangareva: *pito*, navel, end; *pītopīto*, button. Paumotu: *pito*, navel; *pītopīto*, button. Tonga: *bito*, navel. Niue, Rapanui, Nukuoro, Futuna: *pito*, navel. Hawaii: *piko*, navel, end.

I have no hesitation in associating the two as probable offshoots of the same stem and as certainly alternate forms. I can not yet produce any one of these languages in which the two forms appear side by side, yet it is possible to present evidence but little inferior. We have four languages recorded from a sixty-mile stretch of southern coast on the west face of New Ireland, and three of these are so intimately associated that the differences are but dialect variations. In fact before the casting of this note into its final form the Pala speech has become accessible and shall stand as a fifth consenting speech. In these five we find *buto* in Lambell and Lamassa, *bito* in King, Laur, and Pala, all in the sense of navel. The conclusion is not to be gainsaid that *buto* and *bito* mean navel and that Samoan is the only Polynesian speech which has retained the *buto* form and thus avoids confusion with *pito* the end, a confusion which exists in other Polynesian speech, particularly of the Tongafiti swarm.

The possession of the *s*-forms in Buka and New Guinea leads the way to the acceptance of the Malay *pusat*, regarding the final *t* as due to local needs. But we have no evidence for the Malagasy.

The Arabic is scarcely a resemblance.

248.

goro, koro, to snore.

Maori: *ngongoro*, to snore. Mangareva: *ngoro*, id. Paumotu: *ngooro*, id. Hawaii: *nonolo*, id. Tahiti: *ooro*, id. Niue: *tungolo*, id. Samoa, Tonga: *tāngulu*, id.

Viti: *nggonggori*, a man that a god enters when asleep, indicated by a singular kind of snore.

Motu: *uru*, stertorous breathing. Mota: *ngora*, to grunt, to snort, to snore.

Malay: *ngorok*, to snore.

Hebrew: *nahar*, to snort, to breathe hard through the nose. Syriac: *nhar*, id. Ethiopic: *nēhēra*, to snore.

In Nuclear Polynesia we find the stem in association with an element whose function we can not explain, *ta* in Samoa and Tonga, *tu* in Niuē. The remaining identifications, including the Malay, are free of difficulty. The Paumotu *ngooro* is a rare form of duplication; that it is a case of pre-duplication is established by comparison with the Maori.

The Semitic exhibits the usual difficulty in that it calls for the reduction of a trilateral, *nhr*, by internal loss.

249.

kita, to divine; **kikita**, **ngkita**, to perceive or feel with the eye or mind.

Samoa: '*i'ite*, to predict, to foretell; *je'ite'itea'i*, to see indistinctly as in the twilight, to be just distinguishable. Tonga: *kite*, to appear, to see at a distance when at sea; *kikite*, *fakakikite*, to divine, to foretell, to augur, to prophesy; *fekitengaki*, to be in sight of each other; *fakakite*, to look anxiously and narrowly at anything, as at what may be reported (land at sea or a vessel in sight); *fakakitekite*, anything new or strange done or said by a person just before his decease and afterwards referred to as a prognostication. Futuna: *kite*, to appear; *kikite*, to predict, to foresee, clairvoyant. Niuē: *kitekite*, to look at, to examine; *fakakite*, to make known, to show; *fakakiteanga*, a vision, Uvea: *kikite*, *fakakikite*, to augur, to divine, to prophesy; *kite*, to appear. Maori: *kite*, to see, to know, to perceive; *whakakite*, to reveal, to disclose. Mangareva: *kite*, to see, to understand, to perceive. Rarotonga: *kite*, to see. Marquesas: *kite*, to see, to know; *haakitea*, to appear. Paumotu: *kite*, to perceive, to know; *fakakite*, to show, to presage. Tongarewa: *kite*, *kikite*, to see; *hakakikite*, to cause to see. Nukuoro: *kite*, to see; *hakakitea*, to show; *matakite*, a soothsayer, a prophet. Manahiki: *kitea*, to know. Sikayana: *kite*, to see. Aniwa: *citi*, id. Tahiti: *ite*, to know, to understand, to perceive; *faaite*, to teach. Hawaii: *ike*, to see, to understand, to perceive; *hoike*, to show.

Motu: *kito*, to spy, to watch for.

The following mean to see:

Panaieti: *kite*. Sariba: *kita*. Galavi, Boniki, Mukawa: *kitai*. Sariba: *gita*. Sinaugoro, Tubetube: *gitai*. Motu, Rubi, Kubiri, Kiviri: *itai*. Doura: *ikai*. Suau, Dobu: *ita*. Roro: *itana*. Raqa: *iti*. Oiun: *itin*. Pokau: *ikala*. Hula, Keapara: *gia*. Galoma: *ia*. Kabadi: *is'ana*.

Tagalog: *quita*, to see. Malagasy: *hita*, *mahita*, id.

Arabic: *wagada*, to find with the eye or the mind, to perceive.

I suggest an identification in Viti *ndike* to look at, to scrutinize. This is permissible if we regard this as metathetic and in the 3214 type, a rarity in metathesis, yet exactly paralleled in the same language in *uila-liva*.

If it were not for its occurrence in Efaté and in Motu I should class this word as of the Tongafiti migration, for in very few instances do we find a stem so well nigh universal in Polynesia which has left vestiges so rare and so widely scattered in Melanesia. It seems quite as rare in Indonesia.

The Semitic involves Dr. Macdonald's favorite principle of whittling down a trilateral (*wgd*) in any way which will fit it to his proof, in this instance by excision of the first syllable.

250.

kufangufa, to fly, to flap the wings, to flutter.

Tonga: *kapakau*, wing; *kapakapa*, the side fins of sharks, to flicker, to flutter, to hover on the wing. Futuna: *kapakau*, wing; *kapakapatau*, the movement of birds about to perch. Niuē: *tapakau*, wing, fin; *kapakapa*, to flap, to flutter. Uvea: *kapakau*, wing. Maori, Mangaia: *kakapa*, *kapakapa*, to flap, to flutter. Samoa: 'apa'au, wing; 'apa'apa, fin; 'apatā, to clap the wings. Nuguria: *kapaukau*, upper arm. Tahiti: *apaapa*, to flap. Fotuna, *pahkau*, wing. Rotumā: *papau*, id.

Ulawa, Saa, Bululaha, Ugi: *apaapa*, wing. Wango, Alite: *abaaba*, id. Mota: *gava*, to fly with flapping wings. Fagani: *kakafo*, wing, Marina: *gave*, id. Arag: *gapaun*, id. Pak, Sasar, Alo Teqel: *gapugi*, id. Savo: *gavara*, id.

Magindano: *kapakapa*, a fan. Malagasy: *kepakepaka*, flounced in the wind. Malay: *kapak*, to fly with flapping wings; *kepak*, wing. Kawi: *paksa*, bird. Basakrama: *paksi*, id. Magindano: *papak*, a wing. Baliyon: *papak*, a bird. Tagalog, Bicol: *pacpac*, wing.

Arabic: *h'afaka*, to fly, to flap the wings.

In Polynesia gliding flight is expressed by *lele*, flight on flapping wing by *kapa*. In Nuclear Polynesia *kapa* does not pass into the wing sense except through the aid of a composition member *kau*. In Samoan 'au we find this to mean a stalk, a handle; in reference to the body its sense as that of some projecting member is exhibited in 'aualuma (the 'au in front) as a very delicate euphemism for the penis. So 'apa'au would mean literally the projecting member that flaps. We encounter *kapakau* in Tonga, Futuna, Uvea, and in Samoan 'apa'au. In Niuē we find a change that can only mean failure to comprehend and to preserve the primal signification of the composite, for, while *kapakapa* is to flutter, *tapakau* shows a modification that has no reason either in sense or in phonology. I am no little doubtful as to Rotumā *papau*. But as that interesting language has many irregularities which as yet quite elude systematic reduction I deem it advisable to class *papau* with *kapakau*; it does seem an echo form.

Fotuna *pahkau* shows a frontal abrasion of *kapakau*. This is characteristic of the Tongafiti word for wing.

Maori: *pakau*, wing. Moriori: *pakau*, arm. Tahiti: *peheu*, fin. Marquesas: *pe'hehu*, *pekehehu*, wing. Mangareva: *pehau*, wing. Hawaii: *peheu*, wing, fin.

There is a uniformity about these Tongafiti words which indicates a reason acting upon them all which was not in action upon the Proto-Samoan swarm, and we see that the change is progressive in the Tongafiti. As I feel it this reason is that by the time the Tongafiti were ready to leave Indonesia they had lost all recollection of *kapakau* as the flapping member, and being a mere vocable used uncomprehendingly as a label for a natural object it was subject to the humors of speakers in making changes. Thus we may comprehend the changes in Indonesia. Malay, Magindano and Malagasy alone retain the first syllable. All the others received the word when that syllable was gone, received it at the same time probably, received it certainly from the Tongafiti after they had reduced the word. The Magindano *papak* wing and Baliyon *papak* bird smack more than a little of Rotumā *papau*.

Next, when we turn to Melanesia, we find forms variant only of the *kapa* stem. Mota, Marina, Arag, Pak, Sasar, Alo Teqel, Savo, and Fagani all retain the initial palatal. It is only in the Solomons that we find this vanishing, and the mere dropping of the *k* is yet a long way from the dropping of the first syllable entirely.

The Arabic has more than we can digest for our plain *kapa*, and even were we to admit the propriety of Dr. Macdonald's method of obtaining pleasing results by dropping out inconvenient elements the consonants of the Arabic stem, *ḥfk*, which might be identifiable with *kp*, appear in the inverse order.

251.

kusue, kusuie, rat, mouse.

The following words all signify rat:

Samoa: *'isumu*. Nuguria: *kisumu*.

Sesake: *kusuwe*. Mota: *gasuwe*. Vaturanga: *ngasuwe*. Fagani: *gasufe*. Wango: *gasuhe*. Io: *gahuwa*. Merlav: *gasuw*. Sasar, Vuras, Alo Teqel, Norbarbar: *gosow*. Pak: *gosog*. Gog: *gosug*. Tanna: *yasuk*. Mosin: *gusuw*. Motlav, Volow: *gohow*. Lakon: *wohow*. Alite: *ngaua*. Ulawa, Saa, Bululaha: *asuhe*. Malekula Pangkumu: *asua*. Nggao: *kusi*. Nggela, Bugotu: *kuhi*. Savo: *kuzi*. Malekula: *hasup, akasu*.

Malay, Java, Baju: *tikus*. Massaratty: *tikuti*. Gah: *karufei*.

Arabic: *ḥutrub*.

This is a peculiarly interesting word, for, if Polynesian, it seems to be a form that in the travel from Indonesia was widely disseminated by the way and yet not carried the whole distance.

The Samoan *'isumu* differs in one element from *kusuwe*, and nowhere in the many forms in Melanesia do we find a trace of this *m*. Yet the two earlier syllables in Samoan *'isumu* and Nuguria *kisumu* strongly indicate a connection with the Melanesian in the backward past. Samoa has three rat names. It has this *'isumu*; it retains, but little uses, the Tongafiti *'iole*; it employs most frequently the word *'imoa*, which is identifiable only in Nukunau.

Codrington (Melanesian Languages 87, note) says that "the old black Fiji rat is *ngatho*," a clear equivalent of *kusuwe*. This is not in Hazlewood's

dictionary, but Dr. Codrington had the benefit of notes on Viti by Lorimer Fison, a most competent authority; therefore this does not contravene but supplements the earlier dictionary.

In the order in which I have arranged the Melanesian material it will be seen that there is a simple and easily followed sequence down to Alite, except for three items which need comment. In Gog -*g* suffixed to a stem determines its use as a noun, the same holds true of Pak; the two taken together argue the same explanation of the Tanna form. These, therefore, are not to be taken for a mutation to the final palatal. So little is known of Alite that we are not in a position to judge *ngauua* satisfactorily. I have examined all my material carefully with a view of identifying consonant mutations between Alite (and its neighbors Saa and Bululaha) on Malanta, and Vaturanga across the strait, and to no result. It will be plain that *ngua* echoes Vaturanga *ngasuve*, thus *ng(a)(s)u(v)a*; but this wholesale amputation of vowel and consonants too much resembles the freehand proof of Semitic origins to meet with cordial approval. Malekula *khasap* and *akasu* belong somewhere in this sequence which retains the initial consonant. So, too, do Nggao, Nggela, Bugotu, and Savo, in which the final syllable has been abraded. We find a small group in which the initial consonant has been abraded, Ulawa, Saa, Bululaha, and Malekula Pangkumu; and in the last the third consonant has vanished, although under the protection of a final vowel, but compare *fua* (360) Malekula Pangkumu *mi uan* for a vanishing *f*.

The Indonesian offered by Macdonald and by Codrington does not seem susceptible of coordination. The Arabic is, of course, out of the question.

252.

laso, the testicles.

Samoa: *laso*, the scrotum. Tonga, Niuē: *laho*, id. Hawaii, Nuguria: *laho*, the testes in man and animal. Fotuna: *raso*, id. Tahiti: *raho*, pudendum muliebre. Maori: *raho*, the testicles. Ambrym: *luho*, testicles. Paama: *àsī*, id. Malekula: *lisi*, *erasi*, *rason*, id. Bierian: *loho*, id. Malo: *laso*, id. Mota: *lasoi*, the male genitalia.

Macassar: *laso*, penis.

Arabic: *h'iṣy'*, *h'uṣy'*, *h'uṣyat*, *h'uṣa'*, testicles.

It is quite uncertain what was the primal sense of this stem. In Samoa, Tonga, and Niuē it distinguishes the scrotum, and in Samoa the testes are designated by the name *fua* (360) fruit, to which Codrington assigns the root sense of anything globular. This use of *fua* extends into eastern Polynesia. Tahiti: *huá*, testes. Marquesas: *huá*, genitalia in general. Hawaii: *hua*, testes. Mangareva: *ua*, genitalia.

In the area of Tongafiti colonization (Futuna therein inelusive) and in Melanesia wherever the word is identified, *laso* has passed definitely from the scrotum to its contents. In the latter subdivision Mota exhibits for *laso* the same comprehensiveness that *fua* exhibits in the Marquesas and Mangareva, if it be not too violent an interpretation of our vocabulary definitions to assume this to apply only to the male parts. The switch of sex in Tahiti *raho* is unexpected; the entry is derived from Tregear's com-

parative dictionary without opportunity to check his record by consultation of his original source; in Bishop Jaussen's dictionary the word finds no entry.

In Macassar the word passes to yet another part.

The only resemblance which the Arabic bears to *laso* is that its forms also contain a modification of the radical *s* as the second consonant, no sufficient proof of identity.

253.

ma, me, with, and.

Samoa: *ma*, with, and. Tonga, Rotumā: *ma*, and. Futuna: *mo*, with. Niuē: *ma*, and; *mo*, and, with. Uvea: *mo*, with. Tahiti: *ma*, and, with. Hawaii: *me*, with; *a me*, and. Rapanui, Marquesas: *ma*, and (in a particular numeral use); *me*, with. Mangareva: *me*, with, and. Paumotu: *ma*, together with; *me*, with. Rarotonga: *ma*, and. Maori: *ma*, and; *me*, with, and. Nuguria, Aniwa: *ma*, and. Fotuna: *ma*, for, with, along with. Mota: *ma, me*, with, and. Santo: *me*, with: *mo*, and. Pala: *ma*, and, with. Malagasy: *amana*, with. Hebrew: '*im*, with, and. Arabic: *ma'*, id.

I can not do better in comment upon this item than to repeat the analytic conclusions which I reached in an earlier study of root reducibility (27 American Journal of Philology, 389):

Let us now look at the root **ma**. In its paradeictic function we find it serving as a connective; it is the spoke that joins tire and hub into the effective unit of the wheel. It is the conjunction "and," yet its development is in a dual sense incomplete; it is available to connect words of the same grammatical function; it has not yet become sufficiently conjunctive to link clause with clause. At the same time another function, that which we know and employ as prepositional, exhibits in the sense of "with," "for" (for the sake of), thence differentiating to "from" and "on account of"; these different uses we in analytic speech find it necessary to distinguish by varying words; to the Samoan it is sufficiently clear to use *ma* and trust to inference from existing conditions to elucidate the character of the relation the existence of which is thereby indicated. Stated in terms coordinate with those employed in the preceding particulars of this series of roots, we may say of *ma* that it points to the non-ego and not-here and links it to the central concept of that which is active and present.

In the elaboration of my theory of explanation in the paper from which the foregoing is extracted I dissected the central signification of the *a* and sketched out the coefficient value of the several consonantal modulants which might be prefixed thereto. In dealing according to that theory with the other forms associated in this item, *me* and *mo*, we should hold the consonantal value as carrying the linking, conjunctive, associating sense; the shade of variety in meaning would be found to exist as the nucleus of the *e* and of the *o* respectively.

254.

manifenife, to be thin.

Samoa, Nukuoro: *manifnifi*, thin. Tonga, Futuna: *manifi*, *manifinifi*, id. Uvea: *manifi*, id. Fotuna: *mafinfini*, id. Omba: *manivinivi*, thin. Mota: *mavinvin*, id. Baki: *menivinivi*, id. Malekula: *meniveniv*, id. Malo: *tanivinivi*, id. Roro: *nivinivi*,

id. Mekeo: *mangipina*, id. Galoma: *magipi*, id. Keapara: *magivi*, id. Kabadi: *kevekeve*, id. Galavi, Boniki: *kavakavana*, id. Taupota: *wogevagevana*, id. Awalama: *wogewogewana*, id. Wedau: *avavana*, id.

Malagasy: *manifi*, thin.

Arabic: *nahifa*, *nahafat*, *nahif*, 'manhuf', thin, slender.

The word exists for us only as a composite, for the element *ma* is most clearly the prefix of condition which so frequently occurs; the stem *nifi* is nowhere apparent, either independently or in other composition. Simple metathesis occurs in the Fotuna and Mota forms. The word is confined to the Proto-Samoan. The Malagasy identification is far better than is commonly the case with that speech. Macdonald's Semitic identification entails laparotomy of a syllable protected by its inner position.

255.

māso, mahi, to be cooked, done.

Futuna: *moso*, cooked. Tonga: *moho*, cooked, ready to be eaten, rotten; *momoho*, ripe, brown in color, ready to burst. Niuē: *moho*, cooked, done; *momoho*, ripe, mature. Uvea: *moho*, cooked.

Santo: *māa*, cooked.

Malay: *masak*, cooked. Malagasy: *masaka*, id.

Arabic: *naṣ'iga*, to be ripe, cooked.

The Proto-Samoan stem is absent in Samoa, for the reason that *Moso* is the name of one of the great terrestrial gods. The mere suggestion of cookery, the plaiting in coconut leaves and the slinging on a pole like a pig ready for the oven, added the pitch of indignity to the Samoan *ifonga* or solemn rite of submission. It must therefore be clear that *moso* would never be permitted in the land where *Moso* was revered. How little *Moso* would put up with any such disgraceful kitchen verb in the very accents of his name may be inferred from one of the prayers addressed to him: "Oh, *Moso*, make haste, show thy power, send down to down-below-here, sweep them away like a flood, may they never see the light of another day!" Oh, no, it's not strange that *moso* does not mean cooked in Samoa.

I can not accept Macdonald's Santo identification. This involves the dropping of *s* from the inner and protected position. This is not only objectionable in itself, but is contraindicated by *asu* (239) smoke Santo *osun*, and except as to position by *hifo* (206) down Santo *siwo*.

The Malay and Malagasy may be sound; in the dearth of other instances in that area we may not accept them definitely.

Dr. Macdonald undoubtedly relies upon *mahi*, a dialectic form in Efaté and nowhere else found, and upon the *k* in the Malay and Malagasy, to bolster up his Semitic identification, which furthermore involves the *m-n* mutation. This is too much to rest upon premises so insufficiently established.

256.

meta, raw, unripe, crude, green.

Samoa, Tonga, Futuna, Niuē, Maori, Mangaia, Tongarewa, Rapanui, Mangareva: *mata*, raw, unripe. Hawaii: *maka*, id. Fotuna: *mata*, raw. Nuguria: *oimata*, raw; *koimoto*, unripe.

Aneityum: *emetmat*, raw, not dry or seasoned; *mat*, new, raw.

Bierian: *nmata*, raw. Tanna: (*t*)*e'mta*, id.

Macassar: *mata*, raw, unripe. Malay: *matang*, *mantah*, id. Malagasy: *manta*, id.

Arabic: *'anuṭ'a*, to be raw.

The dissimilant duplication of Aneityum *emetmat* establishes perfectly the unity of Efaté *meta* and the *mata* which belongs to the Polynesian of both migrations. The other Melanesian forms are readily recognizable, and in Indonesia the series is confirmatory *inter se*. The Arabic is, of course, entitled to no consideration.

257.

miel, mimiel, red.

Samoa: *melomelo*, *memelo*, red. Tonga: *melo*, *melomelo*, brown, ripe. Futuna: *memelo*, red. Hawaii: *meomeo*, *omeomeo*, red, orange, blushing.

Mangareva: *metometo*, yellow, orange.

Rarotonga: *muramura*, red. Bukabuka: *kura melo*, light red.

Mota: *mera*, red light in morning or evening sky. Vaturanga:

mera, yellow. Wango: *meramera*, red. Fagani: *merameraga*, id.

Baravon: *merāmērē*, id. Bugotu: *mela*, id. Buka: *marara*, id.

Laur: *mīrik*, id. Sesake: *miala*, id.

Malay, Gah, Baju: *merah*, red, bay. Bouton: *merāi*, red. Awaiya:

meranate, id. Salibabo: *maramutah*, id. Malagasy: *mena*, id.

Arabic: *ma'ir*, reddish; *'am'aru*, of the color of red clay.

In the Polynesian the stem is *melo*. Its appearance as *meto* in Mangareva is unusual, but not without the precedent of an *l-t* mutation. The Rarotonga *mula* is a valuable transition form in respect of the final vowel, to link the Polynesian and the Melanesian. In the Bukabuka locution we find *melo* used in limitation of the more widely diffused word for red, *kura*.

In Melanesia the stem is *mera*, with which *mara* in Buka *marara* is readily associable; while Baravon *merāmērē* naturally leads to Laur *mīrik*.

In Indonesia also the stem is *mera*, both independently and in composition, and *mara* also appears. Malagasy *mena* is more remote yet not improbable.

We have yet to discuss two puzzling forms, Efaté *miel* and Sesake *miala*, which are evidently in close consociation. If it were not for the intrusive *i* they would fall into ready alignment with the *mela-mala* stem of Melanesia, but in the present stage of our knowledge we are quite at a loss to account for the intrusion of the vowel. We may feel that these anomalous forms derive from the common stem, but we have no proof which we may bring to bear. The preduplicated Efaté *mimiel* shows that the vowel *i* is no mere accident, but is regarded as an essential part of the syllable *mi*, and therefore structural.

To bring our author's Semitic into alignment calls for the evisceration of an interior consonant, the strongest palatal at that and perfectly supported. Even if that were permissible, which is open to grave doubt, the Arabic *ma'ir* would be brought only imperfectly into likeness with no more standard a form than the *miel-miala* which we have just seen to be wholly unaccountable deviations from regular stem forms.

258.

mitaku, matakū, mitau, matau, to fear, to be afraid of.

Niuē: *matakutaku*, to fear; *matakumataku*, dreaded, inspiring fear.
 Maori: *mataku*, to fear, to be fearful, inspiring fear. Uvea,
 Fakaafu, Nukuoro, Aniwa, Fotuna, Vaté, Rarotonga, Mangareva,
 Bukabuka, Manahiki: *mataku*, to fear. Rapanui: *mataku*,
 alarm, dread, fear. Samoa: *mata'u*, to fear, to be afraid.
 Tahiti: *matau*, fear, dread, to be in terror. Hawaii: *makau*, id.
 Marquesas: *haámetaú*, id.

Sesake, Bierian: *mataku*, to be afraid of. Malo: *matacu*, id. Arag:
matagu, id. Nggela: *matagu*, fear, to be afraid of; *mamataguga*,
 fearful. Belaga: *matagu*, to fear; *mamataguga*, fearful. Mota
 Maligo: *matagut*, to be afraid of; *tagut*, to be startled. Fagani:
maguta, afraid. Mota Maligo: *matagtag*, to fear. Motlav:
metegteg, fear. Ambrym: *matehag*, to be frightened at. Vatu-
 ranga: *matahuni*, to fear; *matahu*, fear. Malekula: *metoh*, id.
 Aneityum: *i-mtac*, afraid, timid, cowardly; *imiimtac*, to fear,
 to reverence. Suau, Tubetube: *matausi*, id. Dobu, Wedau:
matauta, id. Oiun: *matautei*, id. Sariba: *matousi*, id. Tavara,
 Awalama: *matouta*, id. Pokau: *maka'u*, id. Kabadi: *mekau*, id.
 King: *matút*, to fear. Tanna: *meheker*, id. Lemaroro: *marau*,
 afraid. Baki: *merou*, to fear. Tagula: *marode*, id.

Malay: *takut*, fear. Malagasy: *tahutra*, fear; *matahutra*, to fear,
 to be afraid.

Arabic: *taka'*, to fear; *takiyyat*, fear, caution.

The Proto-Samoan stem is **matakut**, and it is not only in form a composite of the *ma* of condition with *takut*, but we have the stem preserved in independent existence in Mota Maligo, in Malay, and in Malagasy. In the Mota *tagut* to be startled, taken in conjunction with Uvea *mataku* a trembling with fear, we may find the primal sense of the stem, the quivering of the body in expectant poise to seek refuge in flight when some unwonted noise in the forest home has at last become identified with danger too overpowering to face.

The final *t* has vanished except in Samoa objective aspect *mata'utia*, where it is protected, in Mota Maligo *matagut*, and in the Indonesian forms. The stem vowel *u* remains in Mota Maligo, Sesake, Bierian, Malo, Arag, Nggela, Belaga, Fagani, Vaturanga. By abrasion of that vowel we find a new closed form in which the final stem syllable has disappeared; Mota Maligo *matagtag*, Motlav, Malekula, Aneityum. The following irregularities call for comment. In Nggela and Belaga occur forms involving the duplication of the conditional *ma*; this is of very rare occurrence and may perhaps argue that the *mataku* stem was so archaic that the recollection was lost that this was the *ma* of condition. This *mamatagu* in these two Solomon Island languages may be understood as introducing a *g* in the stem *t*-place; Ambrym *matehag* seems to do the same; Vaturanga *matahuni* has an *n* in that place. We have not sufficient information as to these languages to warrant venturing an opinion as to whether these are mutations of the stem consonant or local devices of word formation. I have refrained from including Aneityum *imiimtac* with *mamatagu* as duplication of the condi-

tional prefix, for we recognize in *imi* a verb-formative prefix of a causative value. Fagani *magula* is metathetic from the neighboring Bugotu *matagu*. To associate King *matút* with the *matakut* stem involves the extirpation of an inner and therefore abundantly protected syllable, a syllable of a type (*ak*) to class which as a syllable would be doing violence to the whole structure of the Polynesian word; furthermore I can find in the brief King vocabulary no other word of Polynesian resemblance which depends upon such a procedure. Against these valid objections we raise in support of *matút* only its resemblance. Tanna *meheker* is another case of resemblance.

These resemblances are by no means without their value. On the theory that the Polynesian content of Melanesian is loan material we should expect to find for many words no more than the ghost and echo. On a far higher culture plane it is notorious that Hodge, when he marries according to the ordinances of the Church of England as by law established, solemnly avers "with all my worldly goods I thee and thou," the echo of a word of his native language.

To establish Lemaroro *marau* and Baki *merou* as even a resemblance it will be necessary to maintain the *t-r* mutation; this is found in our material four times: in *jatu* (294) stone Malekula *var*, *talinga* (350) ear Malekula Pangkumu *riringa*, *ate* (276) liver Malekula Uripiv *ere*, *futi* (329) banana Moánu *mbür*. If this be considered sufficiently well established we find in *marau* a variant of the Efaté *matau*, a reduced form involving the loss of the *k*, which nowhere else appears until we encounter it ultimately in extreme eastern Polynesia.

The Indonesian identifications have already been mentioned as preserving the primal stem.

In the Semitic offered for our consideration the verb has a partial resemblance to the *takut* stem, the *t* being represented by a palatal. The resemblance of the noun is more specious than real, for it is hard to see why, when there is already a verb or bare stem, we are to accept an almost inflected form as a noun to enter upon a new course of activity in the Pacific as a verb.

259.

nabatí, tooth.

Samoa, Tonga, Niuë, Futuna, Uvea, Fakaafo, Fotuna, Vaté, Moiki: *nifo*, a tooth. Nukuoro, Aniwa, Maori, Tahiti, Hawaii, Marquesas, Mangareva, Manahiki, Rapanui, Paumotu: *niho*, id. Sikayana: *nitcho*, id. Mangaia, Rarotonga: *nio*, id. Nuguria: *ngiho*, id.

Ulawu, Saa, Bululaha: *niho*, tooth. Buka: *niho*, *liho*, *lihon*, *uliho*, id. Lifu: *nyo*, id. Iai: *niou*, id. Fagani: *lijo*, id. Alite, Vaturanga, Nggela, Bierian, Epi: *livo*, id. Arag: *liwo*, id. Mota, Maewo: *liwoi*, id. Motlav: *lewo*, *ne-lwo*, id. Ugi, Bougainville: *liho*, id. Wango: *riho*, id. Mukawa: *nibo*, id. Awalama: *niwo*, id. Tavara: *niwwo*, id. Taupota, Wedau: *ivo*, id. Roro: *nihena*, id. Kabadi: *nise*, id. Pala: *ngise*, id. Motu: *hise*, id. Mekeo: *ni'e*, id. Pokau: *nike*, id. Doura: *ike*, id. Uni: *igeo*, id. Galavi, Boniki: *oke*, id. Panaieti: *ni*, id. Tubetube, Misima: *nini*, id. Tagula: *nungi*, id. Makekula: *ribo*, id.

Matabello: *nifoa*, tooth. Saparua: *nio*, id. Malagasy: *nify*, id.
 Guam: *nifn*, id. Manatolo, Sula: *nihi*, id. Bouton: *nichi*, id.
 East Vaiqueno: *nissy*, id. West Brissi: *nissin*, id. Savo:
nuhsi, id. Kisa: *nihan*, id. Kayan: *knipan*, id. Magindano:
nipun, id. Tagalog: *ngipin*, id.
 Arabic: *nāb'*, *nubūb'*, tooth.

Dr. Macdonald does record that this is *bati* (39) with the article, and he does set it down that Polynesian *nifo* is "another word for tooth, teeth," and he includes his Semitic within the same brackets as the lower set of these teeth. But why does he collate the *nifo* material with this *nabati* if, despite his protestations, he did not think it added to his Semitic scheme?

The *n*-form which holds without exception through Polynesia is found in the western Pacific only in Ulawa, Saa, Bululaha, and Buka, stages in the northern Solomons on the Samoa track, and in Lifu and Iai at the extreme south, the terminus of a migration concerning which Codrington notes (Melanesian Languages, 17) "more archaic they well may be, belonging to an earlier movement of population, carried forwards by an earlier wave of speech passing onwards among the islands, but having somewhere a common origin with those which have since and successively passed among them." Yet in the instance of this word we observe as a curious fact that they most closely resemble Mangaia and Rarotonga of the Tongafiti swarm, known to be the most modern of the successive waves of the speech.

Buka with its *niho* and *liho* is the sure identification of the transition phase of the passage to the *l*-forms which are so characteristic of Melanesia. These forms differ in the second consonant from the primal *f* in Fagani *lifo* and the immediately proximate *h* in Ugi and Bougainville *liho* and Wango *riho*, all these in the Solomon Island crop colonies of the Samoa track; up the labial column to *v* in Alite, Vaturanga, Nggela, Bierian and Epi (if this be not a reference to the Bierian); thence to the semivowel approximating the labials, *w*, in Mota, Motlav, and Maewo; finally down the column to *b* in Malekula *ribo*. So far, in all Polynesia and in all Melanesia, the two vowels have remained unaltered in quality and fixed in position.

When we examine the Indonesian retention of the *nifo* stem we shall find but one of the four elements of the word which has been treated with care, namely, the former vowel, which preserves its place unaltered in all except Savo. Matabello alone has *nifo* and has added a decoration of its own; Saparua has the form which we have seen in the Loyalties and in Mangaia and Rarotonga. There are here no *l*-forms; the *n* is found intact in Matabello, Saparua, Malagasy, Guam, Manatolo, Sula, Bouton, East Vaiqueno, West Brissi, Savo, Kisa, Magindano; in Kayan it is prefaced by a palatal, and in Tagalog it has become the palatal of its own group. The second consonant is kept as *f* in Matabello, Malagasy, Guam. It becomes *h* only in Manatolo, Sula, and Kisa, and in Bouton *nichi* it follows the same change as in Sikayana *nitcho*. It passes irregularly to *s* in East Vaiqueno and West Brissi, and to a gruffer sibilant in Savo. This mutation we explain as meaning that the first change is to an aspirate lying close to the labial position of the buccal organs; then that the mouth can not hold in this position so amorphous a sound as this aspirate; that the aspirates lying near all three series tend to assume the position of the central, or lingual, aspirate;

thence easily pass into the sibilant, regardless of the source from which the aspirate derived. In eastern Indonesia the mutation down the column to the *p* of Kayan, Magindano and Tagalog correlates the *b* form in Malekula. The final vowel, *o* in Matabello and Saparua only, is *i* in Malagasy, Guam, and all the rest save only Kisa and Kayan, in which it becomes *a*, and in Magindano which has *u*. An ephelkustic *n* is found in Guam, West Brissi, Kisa, Kayan, Magindano, and Tagalog.

To bring the Arabic in *nab'* into identity with the *nifo* stem requires but the establishment of the following laws of mutation:

- (1) That *ā* shall pass into *i* without a vestige of transition form.
- (2) That *b* shall represent *f* against the universal practice of the Polynesian users of the word, and the occurrence of this change among the less careful Melanese and Indonesians only in a single instance among the former and but three times among the latter.
- (3) That a final palatal, a strong guttural, shall drop off unnoticed.
- (4) That an *o* strong enough to hold throughout the Pacific area and to be represented by some substitute in all of Indonesia shall be acquired somewhere and somehow.

The initial *n*, however, withstands all hostile assault; it is there in the Semitic.

260.

rā na, a branch.

Samoa: *la*, a branch of a tree; *lālā*, small branches. Nukuoro: *la o te manu*, a branch. Niue: *la*, *lālā* (plural), branch of a tree. Hawaii: *lala*, limb or branch. Futuna: *lāā*, branch. Maori: *rara*, a twig, a small branch. Tahiti: *rara*, a branch; *ara*, small twigs or branches. Rarotonga, Mangareva: *rara*, branch. Fotuna: *ra*, id.

Sesake: *ndara*, a branch. Aneityum: *in-ran*, id. Bierian: *la*, id. Malay: *daan*, a branch. Malagasy: *rahana*, *rahaka*, id.

Arabic: *s'agnat*, *s'agan'*, a branch.

The Polynesian stem is found in Efaté, Aneityum and Bierian, and in Malagasy. In all this range we find no transition forms to account for the *d* which occurs in Sesake and in Malay. Yet an *l-t* mutation is by no means unknown; in fact it occurs in the next item.

I fail to see on what score, even of mere resemblance, it is sought to include this Semitic.

261.

rai, re, the forehead, aspect, face.

Samoa: *lae*, the part between lip and chin without hair; *ta'alaelae*, a wide or bald forehead, a beardless chin. Tonga, Futuna, Uvea, Nuguria, Hawaii: *lae*, the brow, the forehead. Sikayana: *moalae*, id. Niue: *lē*, *matalē*, *mualē*, id. Maori, Tahiti, Paumotu, Rarotonga: *rae*, id. Mangareva: *raemata*, the face, the countenance; *akarae*, to cut the hair on the forehead; *korae*, to cut the hair of women on the forehead; *akakorae*, to cut the ends of the hair short behind. Rapanui: *korae*, the brow.

Nguna: *rae*, the front. Malo: *rai*, forehead.

Malay, Matu: *dai*, the brow, the forehead. Java: *rai*, id.

Ethiopic: *rey*, the sight, aspect.

The stem signification relates to something which, by being clear, comes into prominence from out of its surroundings. This we see from the references to the hair in Samoa and in Mangareva. In Niuē *matalē* and Mangareva *raemata* we have the same two elements; the meaning is the clear spot of the face, and in a people so bushily bearded as are the men of Niuē this must be localized upon the brow so long as the primal significations persist. In Niuē and Sikayana we find in *mualē* and *moalae* composites which define the forehead as the bare spot in front. The town green, *malae* (315), is in form a conditional derivative of this stem. The sense is equally clear, for the *malae* is distinctly a place clear of growth and of the habitations of men; it must be clear in order to fit it to be the stage of the public activities of the simple island life.

The Melanesian identifications are satisfactory, but in the brevity of our vocabulary material we have no means of knowing if aught of the primary sense here persists. The alternative Efaté *re* finds a parallel in Niuē *lē*, the change of *ae* to *ē* being notably common in the latter tongue (17 Journal of the Polynesian Society, 91).

The Indonesian identifications, though few, are found in the strongest languages of that area and are acceptable, continuing from the preceding item the note as to *l-t* mutation.

The Semitic proposed is at least in form a resemblance, but the sense is widely remote from the stem signification of *lae*.

262.

rau, rarau, to grope for with the hand, to seize, to snatch out or away.

Tonga: *lau*, *lalau*, *lauji*, to pinch with the fingers, to nip. Hawaii: *lau*, to feel after a thing; *lalau*, to extend (as the hand), to seize, to catch hold of.

Mota: *rau*, to thrust the hand into a bag; *raun*, to thrust in the hand and take out something. Aneityum: *rap*, *raprap*, to grope for.

Malay: *raba*, to feel for, to grope; *rawa*, to handle.

Arabic: *lamaa*, to feel for, to grope, to take away.

It is by no means certain that Tonga *lau* is herewith correlated, for in that the sense is particularly to nip and in the Efaté, Mota, and Hawaii to grope for and take hold of. The Tonga stem is *laut*, and this does not elsewhere appear. In Mota *raun* it is explained that *n* is a suffix to make verbs definitely transitive; yet, as no less than seven of the Mota consonants are stated to be thus employed indifferently, I incline to view this *n* as radical, the stem being *laun*.

Aneityum *rap* involves a most infrequent mutation from the vowel *u* to the labial mute. The sense is satisfactory, but this change is not to be accepted until a better knowledge of this crabbed tongue shows this mutation to be normal though violent.

The same consideration casts grave doubt upon the validity of the Malay *raba*.

Of course the Arabic *lamaa* is too remote for attention.

263.

soã (saisai), so, companion, follower, especially of the opposite sex.

Samoa, Futuna: *soa*, friend, fellow, companion. Ticopia: *soa*, friend. Sikayana: *tooa*, id. Nuguria: *haisoa*, id. Maori: *hoa*, a friend, a mate; *hoahoa*, a spouse. Tonga, Tahiti, Hawaii, Marquesas, Rapanui, Paumotu: *hoa*, friend, fellow, companion. Mangareva: *hoa*, *oa*, id. Rarotonga: *oa*, id. Fotuna: *soa*, brother's brother, sister's sister. Nukuoro: *soa*, *soka*, a friend. Bierian: *ohoa*, wife, husband. Baki: *koa*, id. Mota: *soai*, member, component part of an organic whole.

Kayan: *hawa*, a wife.

Arabic: *s'ai*, an associate, follower.

Dr. Macdonald associates *soã* and *so* with *saisai* to assemble, with less attention to the etymology of Efaté than to the Semitic with which he wishes to affiliate it.

The sex idea is widely extended; in Efaté, Maori, Bierian, Baki, and Kayan the opposite sexes, distinct statement of the same sexes only in Fotuna. In Nukuoro the intrusion of *k* in the alternative form *soka* is not understood. In Baki *koa* the change from *h* to *k* is so violent, particularly when it is recalled that the small island of Epi is the home both of Baki and Bierian, that we suspect the not unnatural error of a printer in reading foreign manuscript.

Without cognate forms in Indonesia we may neither quite accept nor wholly reject the Kayan word.

The Arabic is greatly in need of proof before it can be accepted.

264.

song i, sung i, sum i, to kiss.

Samoa: *songi*, to rub noses, to salute; *songisongi*, to smell. Futuna, Nukuoro: *songi*, to kiss. Tonga: *hongī*, to smell, to sniff. Niuē: *hongī*, *hohongi*, *honungi*, id. Uvea: *hongī*, *hohongi*, id. Rapanui: *hongī*, to kiss, to smell; *hongihongi*, joy. Paumotu, Tongarewa: *hongī*, to rub noses, to kiss. Marquesas: *honi*, *hoki*, to kiss, to smell. Hawaii: *honi*, id. Rarotonga, Mangareva: *ongi*, to smell, to kiss, to salute by rubbing noses. Tahiti: *hoi*, *hohoi*, id.

Lambell: *isóng*, to smell. King: *sangopi*, id. Aneityum: *aikumnyi*, to kiss. Maewo: cf. *mbunimbuni*, *mbunimbunisi*, to smell, to kiss.

Malay: *chyum*, to smell, to kiss.

Ethiopic: *sa'ama*, to kiss. Arabic: *s'amma*, to smell (there is no trace of this meaning in Efaté).

The Proto-Samoan stem is **songit**.

Outside of Efaté we do not recognize this stem in Melanesia until we reach the New Ireland coast at the east gate of migration. The Maewo forms noted are quite irreconcilable with this stem even in abrasion, and the Aneityum word is more a puzzle than a comparable form. The Lambell *isóng* is clearly homogenetic. King is in geography and speech so close to Lambell that we have no doubt in the recognition of *sang-* in *sangopi*, but

the language is yet so little known that we can not explain the change of vowel or the latter member of the composite.

The Malay is not at all to be considered. It seems to me that Dr. Macdonald has brought in the Aneityum and the Malay to establish a chain running *sungi-sumi-aijumnyi-chyum-s'amma*. Inasmuch as there is no strength in the inner links the chain scarcely supports the Semitic load.

265.

suma, uma, himwa, house.

Maori: *ruma*, a room, an apartment.

The following words mean house:

Duke of York, Motu, Uni, Doura, Kabadi: *ruma*. Wango: *rumwa*.
 Lambell, Lamassa: *rumai*. New Guinea, Laur: *rūm*. Buka:
luma, aluma, lumu. Bougainville, Alite, Ugi, Uni, Pokau:
luma. Iai, Epi, Rubi: *uma*. Lifu, Uea: *uuma*. Lakon:
umwa. Waigiou, Moanus: *ūm*. Tubetube: *yuma*, id. Treas-
 ury Island, Sinaugoro, Hula, Keapara, Galoma, Suau, Sariba,
 Tavera, Awalama, Taupota, Wedau, Galavi, Boniki: *numa*.
 Saa: *numwe*. Tubetube: *numi*, id. Fagani: *rīma*. Ulawa,
 Bululaha: *nimwa*. Tangoan Santo, Ambrym: *ima*. Eromanga:
imo. Aneityum: *im*. Mota, Arag: *imwa*. Deni, Nengone:
mwa. Merlav, Mosin: *imw*. Lo: *emwa*. Motlav, Volow: *emw*.
 Norbarbar, Pak, Leon: *eng*. Makura: *na-ingma*. Aneityum:
neom, niim.

Malay, Baju, Liang, Lariko: *rumah*. Matabello: *oruma*. Kisa:
rome. Amblaw: *lumah*. Cajeli, Caimarian: *luma*. Gah: *lume*.

Mayapo: *humah*. Java: *humah, uma*. Teluti, Nikunau: *uma*.

Arabic: *h'a'mat, h'im'*, house.

Tregear is by no means convinced that Maori *ruma* is not the borrowing of the English room. Since the word does not anywhere else enter the Polynesian area I prefer to let our best Melanesian authority argue the case for his client. I cite herewith Codrington's highly interesting note (Melanesian Languages, 77):

This is an interesting and important word. The very wide range of the word, which in Malay is *ruma*, and the great variety of its forms point to the great antiquity of this as a common possession of these languages. As is the case with the very widely prevailing name for a canoe, we may argue that a word which has spread so far and changed so much goes to show that the thing which it names was known to the undivided people whose dispersion spread the word so widely abroad. If the presence of certain common words in Aryan languages shows that the Aryans did not separate till certain arts were known and practised by the common ancestors, so we may argue that the ocean languages testify that the ancient speakers made canoes, built houses, cultivated gardens, before the time came when their posterity branched off on their way to Madagascar and Fiji.

The word now immediately in view as the name of a house ranges from the Malay Peninsula, through the islands of the Indian Archipelago, to the very extremity of Melanesia in the Loyalty Islands. It has not a continuous range, it appears and disappears at intervals, but in that line and chain of islands it is never absent long. It appears in Mafoor at the northwest of New Guinea, and in Motu at the southeast, and in the Marshall Islands of Micronesia. In Polynesian languages it does not appear; in the Kingsmill it is *im*. The fact that the word has in this way established itself

generally, but not universally, at intervals, and not in a continuous line, shows that it is not one which can be traced to one center, from whence it may be thought to have been introduced by commerce or modern intercourse. The same conclusion is enforced by the consideration of the great variety of the form of the word, which ranges from *ruma* to *eng*. If a word appearing in its full form in Malay were to appear corrupted and changed as it receded in distance from the region in which Malay is spoken, we might well suppose the Malay the original. But when the changes in form bear no certain relation to the distance from Malayan regions, and the variations are local and disconnected, it is not so; some center there must have been, but it can not now be pointed out.

The geographical range of the word must be observed by comparing the vocabularies with the map. The variation of the form can be seen in the vocabularies. In Mr. Wallace's list the Malay *rumah* and the Javanese *umah* give at once typical forms, one with and the other without an initial consonant. Of the first type there are also *luma* and *huma*, of the second *um* and probably *om*. (The Ceram word *feiom*, used by Alfuros, is probably *om*, a form of *uma*, with the collective prefix *fei*, Fiji *vei*.) Out of thirty-three words twenty-two are forms of these types. The variety of forms in Melanesia is greater, but the types are the same; *ruma* is in Duke of York and San Cristoval, *uma* in Api and Lakona. The vowel also changes, and *ruma*, with changes of initial consonant and vowel, becomes *luma*, *nume*, *huma*, *rima*, *nima*. By similar change *uma* becomes *ima*, *ema*, and dropping the vowels at the beginning or end, *'ma*, *im*, *eom*, *em*, *eng*. To account for this last change it is enough to say that, in the neighborhood where it is made at any rate, the *m* is the nasal one which, as mentioned above, regularly changes into *ng*; *ima*, *im*, makes *eng*, as *lima* "a hand" makes Fiji *linga*, Maori *ringa*. This *m* in Nengone is written '*m*', and the Nengone '*ma*' is identical with the Santa Cruz *mwa*.

It will be noticed that Efaté has three forms, all more or less remote from the primal stem. *Suma* is found nowhere else, this being the only language in which the word has initial *s*. *Himwa*, so far as the initial is concerned, seems to be a transition form leading to the general *imwa-ima* of the northern New Hebrides. *Uma* is found in Epi and the distant Loyalties.

As to the Arabic I venture the suggestion that it taxes philological principles far less to present its affiliation with the German *Heimath* and *Heim*.

266.

tanu-mi, tanu-maki, to cover with earth, to put into the ground; **tan i, tun i**, to earth it, to cover with earth and then with anything; **tano, tan**, earth of any kind, soil, clay, ground.

Samoa: *tanu*, to bury, to pave; *tanufale*, to cover a house with coconut leaves in a storm; *tanuma'i*, to cover up with. Tonga: *tanu, tanua*, to bury, to conceal, to hide; *tanuanga*, a burial place; *tanuma*, to bury the dead by numbers; *tanumaki*, to earth up any plant or tree, to hoe, to cover up; *tanumia*, to be buried by falling of earth débris; *tanutanu*, to bury, to cover over with earth; *tano*, a burial place. Futuna: *tanu*, to bury, to inhume, to cover with earth; *tanuma*, a tomb, ditch, trench. Nuguria: *tanu*, to bury; *taruma* (? *tanuma*), a grave. Niuë: *tanu*, to bury, to cover up. Uvea: *tanu*, to bury; *tanuma, tano*, cemetery, sepulcher; *tanumanga*, a pit. Maori: *tanu*, to bury, to plant, to fill up. Tahiti: *tanu*, to plant, to bury. Mangaia: *tanu*, to plant. Mauke: *tanu*, to bury. Rapanui: *tanu*, to hide, to conceal, to plant; *tangata tanu kai*, a cultivator. Mangareva: *tanu*, to plant, to bury, to inhume. Paumotu: *tanu*, to cultivate. Fotuna: *no-tanu, no-tanumia*, to bury. Hawaii: *kanu*, to bury, to cover up in the earth.

Mota: *tano*, ground; *tanu*, to bury with earth. Maewo, Nguna: *tano*, ground. Malo: *tanomia*, to bury. Kabadi: *kano*, land. Deni: *ndano*, ground. Saa: '*ano*, id. Tanna: *tana*, land; (*t*)*anum*, to bury. Tarawa: *tan*, id. Ambrym: *tan*, ground. Aneityum: *in-tan*, id. Lo: *ten*, id. Laur, Lambell, Lamassa: *tuñ*, a grave. King: *nutúñ*, id. Malay: *tanâm*, *tanuman*, to bury, to inter, to plant. Basakrama: *tanam*, id. Malay: *tānah*, land. Arabic: *ṭāna*, to cover with clay; *ṭīno*, *ṭāno*, earth, clay.

After defining *tanumi* and *tan* as burial with a covering of earth Dr. Macdonald says boldly "hence" and proceeds to join therewith *tano-tan*, earth, soil, ground.

We have clearly two distinct stems mingled here.

That which means the ground does not at all appear in Polynesia. In Melanesia it is *tano*, *ndano*, *kano*, '*ano*, *tana*, *tan*, *ten*. In Indonesia we find Malay *tānah* land. With this stem the Arabic certainly has an identity of form and of sense.

The stem signifying to bury is in the Proto-Samoan **tanum**, and the radical *m* holds in Polynesia almost without exception when under the protection of a succeeding vowel. This radical *m* is found in two instances in Melanesia and it persists in Indonesia. The stem in use in Polynesia is *tanu*, but in Tonga and Uvea *tano* is found along with *tanu*. Similarly in Malo we find *tano*, but with the radical *m* to fix the word. It would seem, therefore, that in these instances abraded *tanum* and *tano* have been confused. The Efaté *tun* to bury is confirmatory of the New Ireland grave words *tuñ* and *nutúñ*. With the **tanum** stem the Semitic proposed is in no great accord.

This word has been exhaustively examined in the inner record of its structure in my paper on root reducibility (27 American Journal of Philology, 383).

267.

tau, a season, time, year.

Samoa: *tau*, a season, a year; *tausanga*, a season, a year of six months.

Tonga: *ta'u*, a season, a crop, a year; *ta'ube*, annual. Futuna: *taù*, season for planting and particularly for yams. Uvea: *taù*, era; *tau*, year. Niuē: *tau*, a year, a season. Maori: *tau*, a year. Tahiti, Rarotonga: *tau*, a season. Marquesas: *taù*, a year (of ten months). Rapanui: *tau*, a year, a season. Mangareva: *tau*, a year, the season of the breadfruit. Paumotu: *tau*, a season, a period. Nukuoro: *tau*, *ngatau*, a year. Aniwa: *tou*, a year. Hawaii: *kau*, a season, the summer or warm season, a lifetime.

Mota: *tau*, a season. New Britain: *taun*, a year.

Java, Sulu: *tahun*, a year. Matu: *ta'un*, id. Ilocan: *taoen*, id.

Tagalog: *taon*, id. Bugi: *taung*, id. Macassar: *taoeng*, id.

Malagasy: *taona*, a year, a time, a season.

Arabic: *zaman*, a year. Syriac: *zīban*, id. Modern Syriac: *zōna*, id.

The Sāmoan *tausanga* seems to suggest a **taus** stem. This can not further be recognized in Polynesia; therefore we are not justified in putting it forward adversely to the **taun** stem which appears in all the Indonesian identifications and in Melanesia is found in New Britain.

The Semitic is impossible except Modern Syriac *zōna*, and that is but a partial resemblance.

268.

telei, talai, the ancient axe or adze-like axe (a shell).

Samoa: *talai*, to adze. Tonga: *talai*, to smooth off rough edges.

Futuna: *talai*, to cut off knots or thorns. Niue: *toki talai*, an adze. Maori: *tarai, tarei*, to chop or smooth as with an adze.

Tahiti: *tarai*, to chop or adze a piece of timber; *toi tarai*, an adze. Mangaia: *tarai*, to adze, to hew. Mangareva: *tarai*, to rough hew. Paumotu: *tarai*, to cut, to hew. Hawaii: *kalai*, id. Marquesas: *taái*, to smooth with an axe or tool.

Motu: *talai*, to chop. Mota: *tara*, to hew, chop, cut. Merlav: *tara*, to cut. Massim: *tara*, to cut off. Gog: *tar*, to cut.

Volow: *ter*, id. Aneityum: *inpas aterei*, adze.

Malay: *charai*, to part, to separate.

Arabic: *s'araha*, to cut, to slice, to carve, to dissect.

This stem is readily identified as homogenetic in Polynesia and Melanesia, and it preserves the verb-formative *i* as far away as Motu. The undoubtedly earlier verb *tara* exists in Mota and Merlav, and has undergone terminal abrasion in Gog and Volow. In the Aneityum locution *aterai* has altogether the appearance of identity with *talai*; but Inglis in his vocabulary of that language defines the word: *aterai*, crooked, bent; *inpas aterei*, an adze. Inference should not be allowed to outbalance the record of the reporter; therefore we leave the matter open pending further research in the field.

In the Malay *charai* we find a change of initial *t* which is not wholly without precedent, but of far greater moment is the change of sense; the identification is, therefore, doubtful.

The Semitic is remote from *talai* both in form and in sense.

269.

tōki, an axe; tōk, violence, force.

Tonga, Futuna, Niue, Uvea, Nukuoro, Fotuna, Mangaia, Marquesas:

toki, an axe, a hatchet. Maori, Mangareva: *toki*, an axe, an adze, or similar tool. Tongarewa: *toki*, an adze. Rapanui:

toki, a stone axe. Nuguria: *toki*, a shell axe. Paumotu:

toki, to hit, strike, drive in, the edge of tools. Samoa: *to'i*, a hatchet. Tahiti: *toi*, a hatchet or tomahawk. Hawaii:

koi, a small adze.

Duke of York: *torki, toki*, to cut or lance, to cut out a spear point.

Mota: *toto, totagag*, to chop. Aneityum: cf. *etuko*, to split wood.

Baliyon: *tuk*, to chop.

Arabic: *takka*, to cut. Hebrew: *tōk*, violence.

The Efaté *tōk* violence is visible nowhere within the horizon of our studies, and is suspicious in view of its positive resemblance to Hebrew *tōk* violence.

In Polynesia we find no variation from the axe signification except in the Paumotu, which in many particulars represents a very primitive type of the language. The Paumotu meanings make it possible to accept without hesitation the Duke of York signification, which is not readily associable with a hatchet sense.

The second form in Mota *totogag*, of which *ag* is recognized as a verb definitive suffix, yields us an abraded form *tog*, which undergoes yet further abrasion into *toto*. The Aneityum *etuko* is, like most of the identifications in that obscure speech, by no means distinctly established.

We meet the stem but once in Indonesia, an abraded form as in Mota and with a vowel change like that in Aneityum.

The Arabic is a resemblance; more, however, to the eye than to the ear, for when spoken the trilateral is at once apparent.

270.

tuai, tuei, old, ancient, long ago, a long time hereafter; **bakatuai**, to prolong, to put off, to delay.

Samoa: *tuai*, former, olden, to be a long time; *tuatuai*, somewhat long, to delay; *fa'atuai*, to prolong, to put off, to defer, to delay. Tonga: *tuai*, delay, procrastination, slow, dilatory, to be long, to defer; *fakatuai*, *fakatuotuai*, to linger, to delay, to defer, to procrastinate, to protract. Niue: *tuai*, old, ancient; *fakatuai*, slow. Uvea: *tuai*, to delay, to loiter. Nukuoro: *tuai*, ancient. Aniwa, Vaté: *tuai*, old. Rapanui: *tuhai*, old, ancient.

Eromanga: *itetuai*, of old; *etuai*, some time ago. Sesake: *tuai*, formerly. Mota: *tuai*, old times. Bierian: *tuai*, long ago. Malo: *tuai*, old. Malekula: *tue*, old. Aneityum: *itu*, old, former. Baravon: *kua*, old. Pak: *'ue*, id.

Malay: *tuwah*, old. Java: *tuwa*, id.

Arabic: *'adiyy*, old, ancient.

It seems that here we are dealing with a *tuastem* of which, with conditional *ma*, *matua* (216) may be a derivative. That the stem really is *tua*, and *i* but the definitive suffix, appears in the duplicated Tonga *faka-tuotuai*.

In tracing the stem in Melanesia we find in Eromanga and Aneityum prefixes of uncertain value. Most of the identifications in the western Pacific maintain the full *tuai* form. Absence of the definitive suffix is found in Baravon, if we accept the *t-k* mutation despite the fact that this is its only appearance among eight cases of *t* found in our material, and in Malekula. In this group belongs Pak *'ue*, for it is characteristic of that tiny speech to throw out *t*. The last stage of abrasion is found in Aneityum *i-tu*.

The Indonesian identifications are scanty but valid.

The Polynesian has a *t* in *tuai*; a Semitic word meaning old has been found which has a *d* in it somewhere. Another link has been forged in the chain of Semitic origins.

un, a fish scale.

Samoa: *una*, a scale of a fish, a plate of tortoise shell; *unafi*, to scale a fish. Futuna: *una*, tortoise shell; *unafi*, fish scale. Niuē: *una*, tortoise shell; *hinafi*, fish scale. Maori, Marquesas, Rapanui, Mangareva: *unahi*, fish scale. Tahiti, Marquesas, Paumotu: *unahi*, to scale a fish. Hawaii: *una*, tortoise shell; *unahi*, fish scale. Tonga: *uno*, fish scale, tortoise shell. Uvea: *uno*, fish scale. Fotuna: *ano-na-unafi*, id. Nuguria: *unafi*, id.

Motu: *una*, fish scale; *unahia*, to scale a fish. Aneityum: *ninihen*, fish scale.

Malay: *unus*, to pull out.

Hebrew: *halaš*, to pull out, to pull off. Arabic: *h'ala'a*, id.

The Proto-Samoan stem is **unaf**. In general these closed stems are better preserved in the Proto-Samoan migration than in the Tongafiti; here, however, the strong stem oddly appears where least it would be expected. *Unafi* is in form a verb; the verb-formative suffix *i* is added to the simple stem. In Samoa and Motu *unafi* is a verb and distinct from the noun, in which the final consonant has been abraded; in Maori, Mangareva, Futuna, Niuē, Fotuna, and Hawaii *unafi* is the noun and *una* is either absent or else specialized to mean one of the plates in a head of turtle; in the Marquesas it is both noun and verb.

The only phonetic variants in the Polynesian are these: in Niuē the frontal accretion by an aspirate, this seeming to be sporadic, since a primal aspiration in the stem would have been represented in other languages of the stock in some mutation form; in the same speech the change of *u* to *i*, a change which we shall find again only in Aneityum; in Tonga and Uvea the change of *a* to *o* in the second vowel.

In Motu, that very remote colony of the swarm which left Indonesia by the southern gate, we find noun and verb used exactly as in Samoa. The only other identification which Melanesia has afforded us is *n-inihe-n* of Aneityum. In this the initial *n* is clearly the article; the final *n* is observed upon a great many noun stems which end in a vowel. For the initial vowel of *inihe* we have already observed a precedent in Niuē. The mutation *f-h* is common in Polynesia and we have several instances of its occurrence in Aneityum.

The Malay identification is not only presented as fact by Macdonald, but has also received very respectful consideration by Tregear, who is by no means cordially disposed to the Malayo-Polynesian theory. Yet to accept this identification requires us to assume the equivalence of **unaf** and **unus**, an assumption far too violent to be satisfactory; and then in addition to disregard the fact that in the sense of the Malay *unus* to pull out Samoa has *unusi*, Tonga has *unuhi* and so have several of the Tongafiti languages.

About the only point of identity upon which the Semitic could be hung is the final *s* in Malay *unus*. Now that that is removed from consideration the Hebrew can show no resemblance.

EFATE-MELANESIAN-VITI-POLYNESIAN-MALAY-SEMITIC.

272.

abu, afu, au, ashes; **abuabu, afuafu**, to be dusty, to fly in the air (dust); **libu, lifu**, to be ashy, ash-colored, dirty or covered with ashes, as in mourning for the dead; **mafu**, a thick vapor like dust, uncleanness (ritual) which makes the sight dim.

efu.

Samoa: *efu, efuefu*, dust, to become dust. Tonga: *efu*, dust; *efuefu*, ashes; *efuhia*, dusty, covered with dust; *fakaefu*, to raise a dust; *maefu*, dust; *ngaehu*, muddy, turbid. Futuna: *efu*, dust in general. Niuē: *efu, efuefu*, dust; *efuefu-afi*, ashes. Uvea: *efu*, ashes; *efuefu*, dust. Marquesas: *ehu*, fragments, to fall in particles; *ehu ahi*, ashes; *ehuehu*, twilight of morning and evening. Maori: *ehu*, turbid, mist. Tahiti: *ehu*, discolored, muddy. Hawaii: *ehu*, spray, steam; *ehuehu*, darkness arising from dust, fog or vapor; *kuehu*, to shake the dust from a mat. Mangareva: *ehu*, dust, ashes. Rapanui: *ehu*, firebrand, ashes.

lefu.

Samoa: *lefu*, ashes; *lelefu*, to be burnt to ashes; *fa'alelefu*, to reduce to ashes. Niuē: *polefu*, mist, fog. Futuna: *lefu*, ashes slacked in water for dressing the hair. Uvea: *lefulefu*, ashes. Nukuoro: *lefu*, ashes; *rehu*, dust. Nuguria: *lehulehu*, ashes. Hawaii: *lehu*, ashes; *lelehu*, to see with difficulty, to become blind. Maori: *rehu*, mist; *pungarehu*, ashes; *rehutai*, sea spray; *turehu*, indistinctly seen. Tahiti: *rehu*, ashes, soot, powder in general; *rehurehu*, the dusk. Rapanui: *rehu*, dust. Mangareva: *rehu, reu*, ashes; *rehurehu*, the morning soon after sunrise; *reureu*, morning. Sikayana: *rehu*, lime. Rarotonga: *reu*, ashes; *reureu*, dark. Moriori: *purungehu*, ashes.

nefu.

Samoa: *nefu*, to be stirred up, turbid, muddy; *nenefu*, to be dim, indistinct. Tonga: *nenefu*, twilight, dimness, dim, dull, uncertain. Futuna: *nenefu*, dimness of vision. Uvea: *nefunefu*, darkness, gloom, mist, vapor, turbid, dusty. Maori: *nehu*, dust, steam; *nehunehu*, dusky. Mangareva: *paneuhu*, to dry up, to wither; *paneu*, gray, covered with dust.

Viti: *ndravu*, ashes; *ndravundravua*, ashy; *ndravukasi*, dust, dusty; *ndravusā*, ashes, to rub the head with ashes. Rotumā: *roh*, ashes.

Marina: *avuavu*, ashes. Arag: *taniavu*, id. Lakon: *tangehav*, id. Maewo: *ndigevu*, id. Fagani, Vaturanga, Nggela, Guadalcanar: *ravu*, id. Bugotu: *pindaravu*, id. Nggao: *parafu*, id. Motu: *rahurahu*, ashes, a fireplace. Doura: *kokorahu*, ashes. Kabadi: *rauna*, id. Savo: *lavu*, id. Roro: *rabu*, id. Uni: *labu*, id. Wedau, Galavi, Boniki: *lapukare*, id. Duke of York: *kabu*, id. Taupota: *gabuwari*, id. Wedau: *ai-gabuwari*, id. Sesake:

tano au, ashes. Mota: *rav*, dusk; *ravrav*, dusk of evening; *malurav*, id.; *marav*, dim, misty. Pak, Sasar, Alo Teqel: *wuvus*, ashes. Mosin: *tuwus*, id. Mota, Gog: *tarowo*, id. Vuras, Motlav: *wowo*, id. Lo: *wowa*, id. Norbarbar: *powo*, *puio*, id. Keapara: *abu*, id. Mekeo: *ae-apu*, id. Motu: *gahu*, id. Tavera: *gahue*, id. Awalama: *gahuwe*, id. Sariba: *gavara*, id. Malay: *abu, dabu, labu*, dust, ashes; *kalabu, klabu*, ashy, ash-colored. Java: *awu, kluwu*, dust, ashes. Malagasy: *vuvuka*, id. Arabic: *haba (habu)*, to rise, to float in the air (dust), to become like dust, ashes; *habwat*, dust; *habut*, dust, dust mixed with ashes; *hebwa*, fine dust, powder; *mutahabbi*, weak in sight.

There can be no doubt that an intimate relationship obtains between *efu*, *lefu*, and *nefu*. It is too early to establish the relation, yet from the form I am hopeful that further inquiry along the lines which I have already discussed in the presentation of my theory of development by consonantal modulants will lay bare the life history of this interesting group. The only backward glimpse which our material affords is that which Tonga *efuhia* gives us of a Proto-Samoan stem *efus*, and this is found again to the westward.

As the stems indicate relationship by their form, so do the several significations show that the stems are so near that it is possible for a certain meaning to appear first in one and then in another. The following tabulation will make that clear:

	Dust.	Ashes.	Vapor.	Darkness.	Twilight.	Muddy.
Samoa.....	<i>efu</i>	<i>lefu</i>		<i>nefu</i>		<i>nefu</i>
Tonga.....	<i>efu</i>	<i>efu</i>		<i>nefu</i>	<i>nefu</i>	<i>ehu</i>
Niue.....	<i>efu</i>	<i>efu</i>	<i>lefu</i>			
Uvea.....	<i>efu, nefu</i>	<i>efu, lefu</i>	<i>nefu</i>	<i>nefu</i>		<i>nefu</i>
Futuna.....	<i>efu</i>	<i>lefu</i>		<i>nefu</i>		
Nukuoro....	<i>rehu</i>	<i>lefu</i>	{ <i>ehu</i> <i>nehu</i> <i>rehu</i> }			
Maori.....	<i>nehu</i>	<i>rehu</i> ...		<i>rehu, nehu</i>		<i>ehu</i>
Moriori.....		<i>rehu</i>				
Tahiti.....	<i>rehu</i>	<i>rehu</i>			<i>rehu</i>	<i>ehu</i>
Marquesas...	<i>ehu</i>	<i>ehu</i>			<i>ehu</i>	
Rarotonga...		<i>reu</i>		<i>reu</i>		
Mangareva...	<i>ehu, neu</i>	<i>ehu, rehu</i>				
Hawaii.....	<i>ehu</i>	<i>lehu</i>	<i>ehu</i>	<i>ehu, lehu</i>		

A glance down these columns will show how the sense plays from one stem to each of its associates; there is but one column that does not carry all three stems, and the Maori employs all three to express the signification vapor. We are, therefore, wholly justified in dealing with the three as a unit in examining their exterior relations.

In the three Polynesian lists there is little which calls for explanation, for we scarcely need pause here to dissect the few simple composites. The Moriori *purungehu* ashes is readily reducible as a metathesis upon the Maori *pungarehu*. The crepuscular sense is plain in Tonga, Tahiti, and the Marquesas as an immediate development out of the yet more general meaning of darkness and indistinctness of vision; yet in Mangareva *rehurehu* we find the word transferred from the gloaming before the dawn to a posi-

tion after sunrise, when, in the clear light of day, the primal sense is lost. The Sikayana *rehu lime*, a specialized powder, finds a far-eastern parallel in Tahiti *rehu*, which is distinctly applicable to any powder.

In Efaté we find *efu* (*abu, afu, au*) and *lefu* (*libu, lifu*); *mafu* is not to be correlated with any of the Polynesian stems.

Viti *ndravu*, both dust and ashes, recalls the vowel found in Efaté *abu*, and at the same time the *ndr* is evidential that the Proto-Samoan stem was *refu* with the *r* grasseyé (Samoan Phonetics, 17 Journal of the Polynesian Society, 152).

In Melanesia we shall institute our search for the simple stem. I have already remarked that this was *efus*. This enables us at once to pick up the Vanua Lava forms, the *uwus* of Pak, Sasar, and Alo Teqel; the *s*, in fact the *us*, is clear at first sight, the *f-w* mutation is confirmed by a widely extended range of examples. Mosin *tuwus* is this identified *uwus* with frontal accretion of some sort. Vuras is but a few miles from Sasar along the same beach, therefore *wowo* is readily acceptable as a dialectic variant; the terminal *s* has dropped off and the then final *wu* has undergone modification to *wo* and later duplication. Motlav has the same form, and Lo *wowa* but slightly differs. Having now established *wo* as the vestige of *efu* we find it a composition member of *puwo* of Norbarbar and *tarowo* of Gog and Mota. Starting afresh with *efu*, we find it in Efaté *afu, abu*; in Marina *avuaru*; as a composition member in Arag, Lakon and Maewo forms; having lost its labial we have *au* in Efaté and Sesake, this identification being open to such doubt as our lack of cordiality to internal loss may warrant.

We next examine the *lefu* stem. In Efaté *lifū* and *libu* are clear. *Ravu* is well distributed, both independently and in composition, *rafu, rahu, lavu*, and in Mota *rav*.

The Duke of York *kabu* ashes is to be rejected, but I have left it with this material because of its reappearance in Viti *kambu* vapor, which is one of the senses pertaining to this protean *efu* stem.

Our Indonesian material is scanty, but *efu* and *lefu* stems are recognizable.

In the Semitic offered for our consideration it must be acknowledged that there is a certain resemblance, but the disclosure of a final *t* where our Polynesian has the *s*-terminal is enough to stamp this as not a family resemblance.

273.

(a) *āfa ki, ōfa ki*, to bury.

Samoa: *ūfi*, a lid, a cover, to cover, to conceal; *ūfiſta'i*, to cover with.

Tonga: *uufi*, a cover, to cover, to overspread; *ufiufi*, to cover, to conceal.

Futuna: *ūūfi*, to cover, to hide, to conceal, to disguise; *ūfiā*, covered; *ūfiūfi*, to cover things without enveloping them.

Uvea: *ufi, uufi*, to cover. Niuē: *ūfi*, a covering, to cover up, to conceal.

Maori: *uhi, uwhi*, to cover, a covering.

Hawaii: *uhi*, a covering, a veil, to cover over a thing so as to hide it.

Mangareva: *uhiuhi*, to hide, to cover.

Viti: *umbia*, to cover over; *umbi*, the top, lid, cover, a quilt.

Malagasy: *afina*, to be concealed; *manafina*, to conceal, to bury.

Arabic: "*āba*, to conceal, to be concealed, to bury.

(b) **ui, uui (uwi)**, the yam.

Samoa, Tonga, Futuna, Niuē, Uvea, Aniwa, Sikayana: *ufi*. Vaté: *uf*. Maori: *uwhi, uhi*. Nukuoro, Moiki, Tahiti, Hawaii, Mangareva, Rapanui, Paumotu: *uhi*. Marquesas: *buauhi*. Mangaia, Rarotonga: *ui*. Fotuna: *aufi*.

Viti: *uvi*. Rotumā: *uk*.

British New Guinea, Murua, Kiriwina, Galavi, Boniki: *kuvi*, yam. Nggela: *kuikuvu*, a cover, to cover; *kuvihia*, to cover; *kuikuvu*, a leaf used as an umbrella. Mukawa: *kubi*, yam. Nada: *kuva*, id. Fagani: *uvi*, id. Pokau: *veu*, id. Wango, Saa: *uhi*, id. Motu: *uhe*, the end of the yam, which is kept for planting. Aneityum: *n-uh*, yam. Tanna: *n-uk*, id. New Caledonia: *ubi*, id. Vanikoro: *upie*, id. Baki: *yubi*, id. Eromanga: *n-up*, id. Baravon: *up*, id. Makura: *na-u*, id. New Ireland (Carteret Harbor): *u*, id. Pala: *uh*, id.

Malay: *ubi*, yam. Kayan: *uvi*, id. Java, Kisa: *uwi*, id. Malagasy: *ubi, ovy*, id.

Arabic: *‘ayāb*, roots (so called because buried in the ground).

The cause of this collocation is the satisfaction of Macdonald's Semitic theory in his naïf interpretation that roots are things buried in the ground.

A.

It is highly problematical whether there is any identity between *āfa ki* and *ūfi*. The Polynesian and the Viti make no reference to burial; the dominant sense is to cover by setting the covering agent upon the object to be concealed. It is not until we reach the Malagasy, and a secondary form at that, that we find any recognition of the burial sense. In general I am opposed to the acceptance of any Malagasy identification where there is any but the closest resemblance of form and meaning, except where we find it upheld by a satisfactory suite of transition forms in Indonesia. The Arabic is quite as imperfectly correlated with Polynesian *ūfi* as is Efaté *āfa-ki*, in fact more so, for we should need evidence as to the abrasion of so strong a palatal as “*‘*. Furthermore the Proto-Samoan stem is **ufit**. Its only Melanesian appearance is in Nggela *kuvihia*, which bespeaks a *kuvis* stem, not wholly to be accepted as to *k*-accretion and *t-s* mutation in the absence of transition forms, although we have some evidence tending to establish this mutation.

B.

The absence of the inner labial spirant in the Efaté forms finds a true Polynesian parallel in Mangaia and Rarotonga; in Melanesia it is found only in the most degenerate forms, in which naught survives of the word but its initial vowel.

The Polynesian life-history of the word is plain; it is written about the successive mutations of the central consonant, *f-v-h*-extinction.

In Melanesia we shall examine the identifications by the same criterion. The form *kuvi* is anomalous in the frontal *k*-accretion and it is loosely accredited to a territory too wide and heterogeneous to admit of more precise identification. The *ufi* form is absent from this area. The first stage

of the upward progression therefrom, *uvi*, is found in Fagani, and probably in Pokau if we regard *veu* as a 231 metathetic form. The next stage, the passage to the aspiration, is found in Wango and Saa *uhi*, Motu *uhe*, and in the abraded *uh* of Aneityum and Pala. A further step is represented by the *uvi* of Efaté. Last of all we find that the consonant has vanished to extinction in *ui*, also of Efaté. In the downward progression the first step rests upon the *ubi* of New Caledonia and the Baki *yubi*; the next upon the abraded *up* of Eromanga and Baravon. The last degeneration is shown in the *u* of Makura and New Ireland. In Tanna *n-uk* shows a mutation, labial to palatal, which we should scarcely be able to support if it were not that Rotumā, far more intimately within the Polynesian sphere, has also the form *uk*.

In Indonesia we find five identifications of the most satisfactory character.

The Arabic "*ayāb* offers several difficulties in form besides its manifest lack of connection in sense, even after the pleasing parenthetical information. The guttural "might readily pass into *k* as in *kuvi*, but that is an uncertain form at best and in the wide range of the stem the initial *k* is nowhere else discoverable. The duplicated *u* in Tonga, Uvea, and Futuna is in no sense a parallel to argue a double vowel sound persisting after the dropping of the *y* in "*ayāb*, for the *uu* in these three languages is no more than a device to express the long vowel in a font of mission type which lacked the macron.

274.

āngiēngi, the air, breeze; **īn**, the wind, the air; **langi**, the wind.

Samoa: *angi*, to blow (of the wind); *angiāngi*, to blow gently.

Tonga: *angi*, to blow; *angiāngi*, to begin to blow. Futuna:

angi, *angiāngi*, to blow. Niue: *angi*, id. Uvea: *angiāngi*, id.

Nukuoro: *angi*, the wind; *angiāngi*, a fan. Maori: *angi*, a gentle breeze; *hengi*, to blow gently. Mangareva: *angi*, a

light wind; *angiāngi*, to blow gently. Moriori: *hokaangi*, to shake in the wind. Hawaii: *ani*, *aneane*, to blow gently.

Marquesas: *ani*, the air.

Samoa, Tonga, Fakaifo, Futuna, Niue, Uvea, Maori, Mangaia, Manahiki, Rarotonga, Mangareva: *matangi*, the wind. Paumotu:

matangi, the air. Rapanui: *matangi*, the air, a squall.

Sikayana, Nuguria, Liueniua: *matani*, the wind. Hawaii:

makani, id. Tahiti: *matai*, id. Marquesas: *metani*, *metaki*, id.

Aniwa: *tu-mtangi*, id. Fotuna: *mtangi*, id.

Viti: *thangi*, the wind, the atmosphere; *thangina*, to be blown away by the wind. Rotumā: *lang*, the wind.

Tanna, Eromanga: *matangi*, the wind. Tanna: *mtangi*, id. Aneityum: *nimtinjop*, id. Lemaroro: *langi*, id. Sesake, Paama,

Mota: *lang*, id. Nengone: 'n *lang*, id. Ambrym: *leng*, *ling*,

ying, id. Uea: *ang*, id. Malekula: *ni-en*, id. Tobī: *yang*, id.

Malay: *angin*, the wind, air, atmosphere. Java, Visayas, Tagalog,

Magindano: *hangin*, the wind. Bicol: *hagnin*, id. Bugi:

anging, id. Kisa: *ange*, id. Malagasy: *anina*, id.

Arabic: *nasama*, to blow gently; *nasam'*, *na'sam*, *nasim'*, a light wind.

In Polynesia *angi* is generally the verb; the noun *matangi* is a composite of *angi* in its earlier attributive value with *mata* (324). Only in Nukuoro and in Maori, Mangareva, and the Marquesas does *angi* function as noun. The Proto-Samoan stem is **hangi**, this being the true light aspiration which has wholly vanished in the current phase of the languages and is recoverable only from Viti *thangi*. With this *angi* is affiliated the *āngiēngi* of Efaté.

So, too, in an abraded and degraded form is, in my opinion, Efaté *in*. In its first stage, the simple abrasion, we find Uea (Loyalties) *ang*; parallel with this, but in the remoter Micronesian area, is Tobi *yang*. Thus we reach Ambrym *ying*, from which it is but a simple step to *in*. Another short step thence leads us to *ni-en* of Malekula.

The common Polynesian *matangi* appears intact in two of the languages of the New Hebrides, of which Tanna has a shortened form *mtangi*, which also appears in the Polynesian verge islands Aniwa and Fotuna. A yet further deviation from this stem is the rude *ni-mtinjop* of Aneityum.

Interwoven with these wind words we find *langi*. I feel that this is the Polynesian *langi* sky borrowed with only a general regard for its sense. We find it in the wind meaning and in its full *langi* form in Efaté and Lemaroro; abraded in Sesake, Paama, Mota and Nengone; abraded and subjected to vowel deterioration in Ambrym *leng*, *ling*. Of these Nengone and Mota express the sky by Melanesian words. The Melanesian *lang* wind occurs in Rotumā, which uses *langi* for the sky.

In Indonesia the primal aspiration is retained in Java, the Visayas, Tagalog, Magindano and Bicol; and in these and in the other instances cited the identification is wholly satisfactory except for the apparent inversion *gn* in Bicol.

Between *hangi* and Semitic trilaterals **nsn** it is impossible to see any relation.

275.

- (a) **aka**, *koa*, stringy, fibrous; **akoa na**, **ako ana**, root (literal and figurative); **aka na**, **ek**, **eka na**, a relative, family connection (considered as root or offshoot from).

Samoa: *a'a*, fibers of a root, family connections, a plant whose root is sometimes eaten. Tonga: *aka*, the root of trees, to take root in the earth. Futuna: *aka*, root in general, a vine with an edible root. Niuē: *vaka*, a root; *aka*, a soft-leaved creeping plant whose root is eaten in time of scarcity. Uvea: *aka*, root. Maori: *aka*, long fibrous roots, a climbing plant. Tahiti: *aa*, roots. Hawaii: *aa*, small roots. Marquesas: *aka*, a root; *eka*, young roots of trees from which native cloth is made. Rarotonga, Nukuoro, Rapanui, Paumotu: *akā*, root. Nuguria: *haka*, id.

Viti: *yaka*, a creeper whose root is edible.

- (b) **kaka naniu**, the fibrous substance, like coarse cloth, that grows around the stem of the coconut.

Samoa: *'a'a*, *lau'a'a*, the fibrous stipule of the coconut leaf. Tonga: *kaka*, thin fibrous substance found around the young coconut. Futuna: *kākā*, species of tissue which grows on the coconut. Maori: *kaka*, anything fibrous or stringy. Marquesas: *kaka*,

web or cloth covering the leaves of coconut trees, a sack. Mangareva: *kaka*, the envelope of coconut leaves. Tahiti: *aa*, the fibrous substance which grows on the coconut, the husk or covering on the young breadfruit branches. Hawaii: *aa*, the cloth-like covering near the roots of coconut leaves, a coarse kind of cloth.

Viti: *waka*, the fibers or roots of a tree. Rotumā: *va'a*, root.

These all signify root:

Murray Island: *sip kak*. Duke of York: *akar*. New Britain: *okor*. Bugotu: *oga*. Savo: *ogni*. Arag: *garo*. Alite: *kalokalo*. Lo: *gurah*. Merlav: *gari*. Gog: *gerin*. Mota: *gariu*. Motlav: *goren*. Sasar: *gorgi*. Pak, Alo Teqel: *gergi*. Volow: *girigi*. Mosin: *sigrigi*. Omba: *goarigi*. Maewo: *goarii*. Lakon: *gegi*. Marina: *goe*.

Malay: *akar*, the roots of a plant, a scandent plant, the parts of a plant that climb; *akar*, root, origin, principle, foundation (this last word is said by Crawfurd to be Arabic). Kayan: *aka*, root. Salayer, Gah: *akar*, id. Sula: *kao-akar*, id.

Arabic: '*akka*, '*akak*, to be split, fissured; '*akko*, a fissure; '*akikat*', a bag; '*awako*', small sprouts shooting from the upper part of a palm; '*ikkano*', shoots sprouting from the roots of palms and vines; '*akka*, to send forth such shoots from the roots.

A.

In *aka* we find two words alike in form, *aka* a root and *aka* the vine. In general these two words have exactly the same form, but in Niuē and Viti they are distinguished and in practically the same way. The root signification in Niuē is expressed by *vaka* (*vaka* is also canoe); in Viti *waka* (canoe being *wangga*), and Rotumā *va'a* (*vaka* being canoe) are the same. If this *v*-initial were radical we should expect its recurrence somewhere along the line; the frontal accretion of Polynesian stems is so unusual that we are without data for its intelligent study. The plant name in Niuē is *aka*, as in the rest of Polynesia. In Viti it is *yaka*. This Viti *y*-initial is of great interest and therefore I give in the following list all the instances in which I have identified the word in which it is used with a Polynesian stem.

Viti.	Samoa.	Meaning.	Viti.	Samoa.	Meaning.
<i>yambia</i>	<i>pia</i>	arrowroot	<i>yate</i>	<i>ate</i>	liver
<i>yandra</i>	<i>ala</i>	awake	<i>yatu</i>	<i>atu</i>	a row in series
<i>yaka</i>	<i>aka</i>	a plant	<i>yava</i>	<i>vae</i>	foot
<i>yane</i>	<i>ane</i>	a moth	<i>yava</i>	<i>pa</i>	barren, of women
<i>yani</i>	<i>ane</i>	directive	<i>yāvato</i>	<i>ajato</i>	a maggot
<i>yasi</i>	<i>asi</i>	sandalwood	<i>yawa</i>	<i>ava</i>	a fish

In *yambia* and in both identifications of *yava* it will be seen that it is not merely *y*-initial but the syllable *ya*. There is nothing in the life-history of these words (cf. 276 for the only other instance included in these data) to indicate that the Viti *y*-initial retains the impress of something radical. Yet one must regard the impression unavoidably acquired that Viti *yaka*, e. g., retains some delicate intonation of vowel which characterized in the Proto-Samoan the initials of these words.

Efaté *aka* of relationship is repeated only in Samoa. The word for root, *akoa*, despite its extra syllable, may be found to come into concord with Polynesian *aka* through the equivalence of *aka-koa* fibers. The type of root embraced in this word is the fibrous roots, as reappears here and there in these definitions.

In Melanesia the identification is intricate. The Murray Island locution seems to include a form of this word. The Duke of York *akar* is a certain identification. New Britain *okor* is clearly the same word, and Bugotu *oga* comes readily into line, and Savo *og-ni* is recognizable. If now we accept an abraded form *ka*, not found independently, we shall find a chain of development as follows:

<i>gar</i> Savo, Merlav, Mota, Alite.	<i>gor</i> Motlav, Sasar, Omba, Maewo.
<i>ger</i> Gog, Pak, Alo Tegel.	<i>gur</i> Lo.
<i>gir</i> Volow, Mosin.	

Lakon *gegi* and Marina *goe* are not to be omitted, but they are highly irregular.

The Indonesian identifications are very clear.

Unfortunately for the Semitic identifications offered their correlation depends on the harmonizing of *aka* and *kaka*. Even then they have no significations which mean fiber, root, or this specialized stipule.

B.

It is not improbable that *aka* and *kaka* are homogenetic, but the languages have not yet been sufficiently studied after my theory of coefficient modulants to enable us to present any sort of proof. *Ex hypothesi* we should have a stem *ka* with a broad meaning of fiber; the element *a* should determine the *ka* fiber in some such manner as to limit it to root fibers; the reduplicated *kaka* with its intensive force should picture the interlacing fibers of this natural product. Unfortunately we can not yet prove a single one of these points. Our *kaka* is limited to Polynesia and restricted to the coconut fabric except that in Tahiti it extends to the breadfruit, the bamboo, and the sugarcane, and that among the Maori, who have not in their colder land the coconut, it has possibly reverted to the primordial sense of anything fibrous.

276.

ātē, the liver (of a shark), the spleen; **are**, the liver; **uateam**, the kidneys. Samoa, Tonga, Futuna, Niuē, Uvea, Fotuna, Nuguria, Maori, Tahiti, Marquesas, Mangareva, Rarotonga: *ate*, the liver. Rapanui: *ate*, the liver, the lungs. Hawaii: *ake*, id. Viti: *yate*, the liver. Solomon Islands: *ati*, the chest. Malekula Uripiv: *ere*, the liver. New Guinea (Macley Coast): *arre*, the liver. Mota: *varai*, *vare*, the chest, the liver. Rubi, Suau, Dobu: *ate*, the liver. Wedau: *ate*, the gall bladder. Motu: *ase*, *aze*, the liver. Roro: *ahe*, id. Mekeo: *ae*, id. Nada: *ata*, id. Sariba: *kate*, id. Mukawa: *katekate*, id. Kiriwina: *kata*, id. Murua: *katu*, id.

- Sinaugoro: *gase*, id. Galoma: *gae*, id. Hula: *aie*, id. Awa-lama: *ade*, id.
 Malay: *ati*, the liver, the heart (morally). Java: *ati*, the heart.
 Kisa: *akin*, id. Magindano: *ati*, the liver. Pampangas: *ate*, id. Ternati: *hut*, id. Matu: *atai*, id. Tagalog: *atay*, id.; *ati*, the middle.
 Arabic: *kabd'*, *kabid'*, the liver. Hebrew: *kabed*, id. Ethiopic: *kabde*, id.

In the Efaté are several puzzles. The general name for the liver in all Polynesia is here the spleen of men, and it should be borne in mind that in an anthropophagous society the works of one's own kind are far more familiar objects than in communities of a wider dietary. The word does appear as the liver, but of the shark; the human liver is *are*.

It is possible that *ate* may become *are*, this depending on the validity of the proof establishing the *t-r* mutation presented in note 258. *Are* is readily identifiable as *ere* in Malekula Uripiv, *arre* in New Guinea. Mota *vare* may indicate: (1) that there is a stronger stem from which *are* develops by frontal abrasion—in which case the *ate-are* identification is scarcely probable; (2) that Mota has acquired *v* by frontal accretion, a process which is by no means satisfactorily established; (3) Mota *vare* in conjunction with Viti *yate* (see note 275) may indicate some light initial sound in Proto-Samoan, too light to be caught in the general scheme of Polynesian consonant mutation, but attracting the ear of the Melanesians as a sound to them difficult and unusual, therefore requiring special effort to preserve, thus accounting for the variance of the result in Mota and Viti. My own opinion inclines to the third view. The fact that in Mota the liver word includes the chest leads naturally to the inclusion of Solomon Island *ati* chest and Tagalog *ati* the middle in these identifications.

The Indonesian citations are perfectly satisfactory.

The Semitic is the trilateral **kbd**. No trace of the **d** is found in the three eastern areas. The subject of an initial sound has already been discussed. We know it only as astronomers know invisible celestial bodies by the regularity of certain perturbations in their computations. We do not certainly know what this echo of an initial sound may have been, but we do know beyond any doubt that it could not have been *k*, for the mutation scheme of that palatal is abundantly understood.

There remains to us the consideration of Efaté *uateam*. I cite Dr. Macdonald *in extenso*:

In Efaté *uateam'* (d. *uateau*) the kidneys is *ua ate am'*, lit., fruit of the liver (or inside) of the belly (*am'* the belly); *ua-nate-natuo* or *ua-nate-tuo*, the calf of the leg, in one dialect is denoted by *uateau natore*, lit., kidneys of the shin (i. e., the leg from the knee to the foot), and *uateau laso* denotes kidneys of the scrotum; *ua*, fruit, is used because the parts spoken of are round or fruit-shaped.

The validity of this determination of *uateam'* as pertaining to the *ate* liver stem rests upon *ua-ate*, fruit of the liver, becoming *uate* through crasis. In my judgment it is simpler to avoid all reference to *ate* liver and to find in *uate* an identification with *fuata*, the stronger form from *fuat* fruit, as to which see note 360.

277.

āua (āwa), nāua, uā, veins, muscles.

Samoa: *ua*, sinews, tendons, veins, arteries. Tonga: *uoua*, sinew, tendon; *uouatanu*, deep, out of sight, the veins of the arms. Futuna: *ua*, vein, sinew, muscle; *ūaūa*, veins which show. Uvea: *ua*, vein. Maori: *uaua*, a sinew, vein, artery. Tahiti: *uaua*, sinew, tendon, ligament, vein. Marquesas: *uaua*, vein, artery, nerve, tendon. Mangareva: *ua*, tendon, vein, nerve. Rapanui: *ua*, sinew, tendon; *uaua*, vein. Paumotu: *tareua*, tendon. Moriori: *uau*, artery. Nuguria: *nauka*, vein. Hawaii: *aa*, vein.

Viti: *ua*, a vein, muscle; *vakaua*, *uauana*, muscular, strong.

Laur: *ūrat*, vein.

Malay: *urat*, nerve, sinew. Matu: *urat*, vein, sinew. Ilocan: *urat*, vein. Tagalog: *ugat*, id. Pampangas: *uyat*, id. Kayan: *uat*, sinew. Java: *wad* (through *uhat*, *uat*), vein, muscle. Bugi: *urök*, vein. Malagasy: *uzatra*, *huzatra*, vein.

Arabic: '*irḳ*', '*araka*', veins.

Excising the article *a(na)* the Efaté *uā* accords with the *ua* of Polynesia in form and general signification. In the crude anatomical knowledge of these races it is easy to see what *ua* really is, the cordlike bodies in the flesh which appear under the skin. Thus vein and tendon are the same thing and one word describes them. It is not until we reach Hawaiian *aa* that we find any variant of *ua*.

Our only Melanesian identification is Laur *ūrat*. This is a form which appears exactly in three Malayan languages. Laur is right in the east gate in a region where it is possible to suspect a late Malayan source of the word after the Polynesian migration had passed through.

The Indonesian forms exhibit a remarkable treatment of the *ua* stem, so remarkable that we may entertain grave doubts of their identity. There is everywhere one consonant unaccountable and generally two, the Polynesian stem nowhere exhibiting the slightest trace of any consonant. Kayan *uat* is the nearest approach to *ua*; from that to Malay *urat* we have a steadily strengthening chain. These two consonants are such as the Polynesian would have had no difficulty in preserving had they been primordial.

The Semitic here offered is yet farther removed from *ua*; it is even stronger than *urat*, which only imperfectly does it resemble.

278.

bwa, ua, boua, to rain.

Samoa, Fakaafu, Futuna, Uvea, Fotuna, Nuguria, Maori, Tahiti, Hawaii, Rarotonga, Marquesas, Mangareva, Rapanui, Manahiki: *ua*, rain. Aniwa: *ua*, *towa*, id. Sikayana: *oua*, id. Nukuoro: *mata-ua*, raindrop. Tonga, Niuē: *uha*, rain.

Viti: *utha*, rain. Rotumā: *uas*, id.

The following signify rain:

Sesake, Marina, Tangoan Santo, Suau, Maewo: *usa*. Dobu, Kubiri: *usana*. Kiviri: *usan*. Sariba: *kuse*. Vaturanga, Bugotu, Nggela: *uha*. Deni: *ua*. Epi: *ua*, *yua*. Baki: *yuo*.

Bierian: *nihua*. Arag, Omba: *uhe*. Aneityum, Eromanga: *ehe*.
 Guadalcanar: *utha*. Alite: *uta*. Santo, Vaté, Malekula: *us*.
 Lakon: *uh*. Ambrym: *o*. New Ireland (Duffield): *eyüs*, *eus*.
 Rubi: *ura*. Buka: *urata*, *uroto*, *uruotta*. Bougainville: *urata*.
 Gog: *urei*. Arag, Merlav: *reu*. Pak: *wat*. Sasar, Alo Teqel:
wet. Lo: *weta*. Volow: *wend*. Norbarbar, Vuras, Mosin: *wen*.
 Mota: *wena*. Wango, Fagani: *rangi*. Nggao: *hani*.

Kayan: *usan*. Togeian Islands: *udjan*. Rotti: *udan*. Matabello:
udama. Kaili: *uda*. Malay, Sandol: *hujan*. Java: *hudan*.
 Gani, Wahai, Salu, Timor, Visayas: *ulan*. Tobo: *u'lan*.
 Cajeli, Caimarian: *ulani*. Bual: *ulanu*. Awaiya: *uláne*.
 Liang, Morella: *hulan*. Batumerah: *hulani*. Amblaw: *ulah*.
 Ende: *ura*. Tidore, Pampangas: *uran*. Ceram: *urana*. Sali-
 babo: *wrong*. Kisa: *ungang*. Gah: *uan*. Malagasy: *orana*.
 Galela: *hura*. Baju: *huran*. Teor: *hurani*. Lariko: *haran*.
 Sula: *huya*. Bolanghitam: *oha*. Mysot: *golim*.

Arabic: *ba'a*, to rain continuously; *ba'a'a*, rain, rain water.

The Proto-Samoan stem is **uha**. This is shown by Viti *utha*, which might derive with equal facility from **uha** or **usa**, but if the latter were radical Samoa would have preserved it as *usa*, and it would have appeared as *uha* in the long list of sister languages which represent a Proto-Samoan sibilant by the aspiration. It does appear as *uha* in Tonga and Niuë, which normally preserve the Proto-Samoan *h*. In Rotumā it has become *usa* and has then undergone metathesis to comply with the local idiosyncrasy for closed stems. In Efaté the prefixing of *b* is unexplained.

The Proto-Samoan **uha** is preserved in Vaturanga, Bugotu, Nggela; with one vowel change in Arag and Omba, with alteration of both vowels in Aneityum, and with terminal abrasion in Lakon. Guadalcanar repeats the Viti *utha*. The mutation to *s* is seen in the *usa* of Sesake, Marina, Tangoan Santo, and Maewo; the *us* by abrasion in Santo, Vaté, and Malekula; probably in Duffield's New Ireland *eyüs*, *eus*. The *ua* of the modern phase of Polynesian is found in Deni and Epi, and in the latter island both Baki and Bierian preface it with weak sounds. The *uta* of Alite is a degeneration form of Guadalcanar *utha* arising from a second borrowing of loan material and without knowledge of the true form of the original. This is no merely theoretical deduction. In Fiji I have observed that Melanesians in learning the Viti almost uniformly reproduce the *dh* of that speech with *t*, *d*, *nt*, *nd*, where the sound (though the Fijians had no knowledge of the fact) was the preservation of Polynesian stems containing the aspiration. The *o* of Ambrym is explicable as a degeneration form to which we are led by Lakon *uh*.

We must postpone further consideration of the Melanesian material until we have examined the Indonesian record. We shall compare these forms with the primal and successive forms hereinbefore developed.

uha. This appears in but a single instance, Bolanghitam *oha*.

usa. This, too, is found but once, Kayan *usan*, in which appears the final Indonesian *n* which is so prevalent in this area and will not be further noticed here.

ua. In Gah *uan* and in Sula *huya* with the prefix of the aspiration which is found in Bierian *ni-hua* and freely in Indonesia.

We now enter upon a great group of forms in which the primal aspiration has undergone greater mutation. The majority of these mutations are in the lingual series, a proof that the original is the *h* near the lingual closures. In this series we shall consider the weakening mutations, those upward in the vowel direction, disregarding the initial accretion of *h* and the formative terminal *n*.

- ula.** Gani, Wahai, Salu, Timor, Visayas, Tobo, Cajeli, Caimarian, Bual, Awaiya, Liang, Morella, Batumerah, Amblaw. Mysot *golim* may be considered in this series, but with no great insistence.
- ura.** Ende, Tidore, Pampangas, Ceram, Salibabo, Malagasy, Galela, Baju, Teor, Lariko.

We next examine the strengthening mutations, the downward movement. The first of these is *usa*, already presented as a normal variation.

udja. Togean Islands, Malay, Sandol.

uda. Rotti, Matabello, Kaili, Java.

We have a single example in which occurs *h-ng* mutation; this represents a resultant of the first weakening variation to *ula* and then the horizontal strengthening by movement to the palate, *l-ng* being a mutation of which the tabular view will supply examples in Melanesia. These are to be regarded as specifically Indonesian mutations; they are not found at all in Polynesia, and *h-j* and *h-d* very sparingly in Melanesia outside this stem.

We shall now resume the consideration of the Melanesian material. The *ula-ura* which has occupied so large a space in Indonesia may with considerable probability be identified in Buka and Bougainville *urata* and variants. In case this identification be considered acceptable I would ascribe it to a Post-Polynesian period, a raid along the ancient track conducted by Indonesian peoples, for these two northern outliers of the Solomons are within reach of the prahus. In note 277 I have already introduced this explanation. But Gog *urei* and Arag-Merlav *reu*, metathetically derived therefrom, lie geographically too remote to be susceptible of this explanation in view of the fact that no intervening record appears. But is such the case?

In Buka *uruotta*, readily seen to be a variant of *urata*, we find the possibility of a transition form, a stem in which the final *t* is established for this area. It is possible that in further borrowings *uruotta*, losing its first two letters (not a true syllable), might, as *uotta*, lead us to *weta* of Lo, *wet* of Sasar and Alo Teqel, *wat* of Pak. From *wet* to Volow *wend* is easier than it might seem, for *wet* varying toward *wed* would encounter the idiosyncrasy that Volow and several other Melanesian languages, as well as Viti, can not essay the *d* without the supporting preface of the nasal of the same series. From *wend* to *wen* and *wena* is very simple on the explanation of secondary borrowing, as already pointed out in the case of *h-th-t*, the reinforced consonant being objectionable to later borrowers, and on that score they reject the final one of two linked sounds in their ignorance that this it is which represents the primal sound. Thus we may bring the second group of Melanesian identifications into line, representative of a Post-Polynesian movement.

The third Melanesian group, Wango-Fagani *rangi* and Nggao *hangi*, is the Polynesian *langi* the sky, which we have already seen (274) pressed into

Melanesian service to denominate the wind. The reason is not far to seek, for it's the wind and the rain and the sky above us all, for it's all one and naught lies beyond but the great, the pitiless gods.

And this Semitic, foolishly treading on the heels of so wide a unity, has but this plea to make, that Efaté has added to *uha* a *b*, which nowhere else appears to have left a trace.

279.

bwabwa, a hollow, channel or bed of a stream dry except after heavy rains, an opening through the jungle, a board; **bwala**, level.

Samoa: *Papapapa*, the name of a rocky path among cascades in the bed of a stream just south of the *tuasivi* on the *alasopo* from Apia to Safata; *papa*, a rock, a board, plane, level, flat; *papapapa*, level, as a rocky road. Tonga: *papa*, a board, plane, even (as a road much trodden); *papapapa*, smooth. Uvea, Futuna: *papa*, a board. Niuē: *lau-papa*, a board, a floor. Nuguria: *papa*, rocks. Maori: *papa*, anything broad, flat and hard, to lie flat, a flat rock, a slab, a board, a door, a shutter. Tahiti: *papa*, a board, a flat rock. Hawaii: *papa*, applied to many substances having a hard flat surface, a board. Mangaia: *papa*, a base, a foundation. Mangareva: *papa*, a foundation, a plank. Marquesas: *papa*, stones on the shore; *papahua*, a board; *papapoho*, a plank, a gate, a door. Paumotu: *papa*, a rock; *tipapa*, lying flat. Nukuoro: *papapa*, flat; *papapapa*, low.

Viti: *mbamba*, a board.

Motu: *papapapa*, a flat rock. Mota: *taptapapa*, flat-sided; *tapa*, a board; *papalak*, *papalaota*, thin. Aneityum: *apalapal*, thin, flat. Malay, Basakrama: *papan*, a board. Macassar: *papang*, id. Bugi: *papon*, id.

Arabic: *baba-t'*, surface, board, table, slab; *bib'*, channel; *bab'*, door, gate, hall; *baba*, to dig a hole. Hebrew: *babah*, a gate.

A particularly interesting coincidence of specialized significations lies in Efaté *bwabwa* and the Samoan *Papapapa*.

In the Polynesian which we can mass this stem appears as a duplication of *pa*. But Efaté *bwala*, paralleled by Aneityum *apalapal* and Mota *papalak* and *papalaota*, very strongly suggests a stronger closed stem *pal*. The other Mota forms seem to be composites of *ta* and *pa*, for *taptapapa* is explained by Codrington as a duplication form, although highly irregular when referred to Polynesian duplication mechanics.

If this *pal* stem be acceptable it interposes difficulty in the way of Semitic identification through form resemblance.

280.

balu-sa, to paddle, row; **balusa sa**, paddle or row with it (a paddle or oar).

Epi dd. *mbeluo ka*, *mbahuakin*, v. t., Aneityum *aheth*, to paddle, to row, to sail, Ambrym *fuloh*, to paddle, Fijian *ai vothe*, an oar, *vothe*, to paddle, to row, *vothe-taka*, v. t. (= **balu-saki**, to paddle a canoe, to row a boat), Paama *palusa*, Malekula d. *masu*, Malekula Aulua *sua*, Malo *mo sua*, Tanna *asua*, Futuna *sua*, Malagasy *vui*, act of rowing; *mivui*, to row; *vuizina*, rowed; *fiuvi*, an oar; Malay *dayung*, an oar; *dayung*, *bârdayung*, to row.

NOTE: *Balu-saki* is the same as *vothe-taka*. The verb "to row" is *balu*, *vothe*, (*m*)*beluo*, (*m*)*bahua*, *vui*, *masu*, and without the preformative *b'*, (*v'*, *m'*), *asua*, *sua*, *dayung*, and the *l* in *balu*, *th* in *vothe*, *h* in *mbahua*, *s* in *sua*, *d* in *dayung*, all are variations of the same original consonant which is elided in *vui*. The word for oar, *ai vothe*, *fivui*, is in Efaté *uose*, d. *nohe* (*wose*, *wohe*), Futuna *foi*. In Futuna the connection between *sua*, to paddle, and *foi*, an oar or paddle, is not so apparent as that between Malekula Pangkumu *su*, to paddle, and *bos*, a paddle, because in *foi*, as in *vui* (Viti *vothe*) the *s* has been elided; and the connection between Efaté *balu*, to paddle, and *uose*, a paddle, is not so apparent as that between Epi *mbahua*, to paddle, and *voho*, a paddle, Epi d. *bahua*, to paddle, and *boho*, a paddle. Arabic *gaḍafa*, *ḡaḍafa*, (or 'at'afa), Amharic *ḡazaḡ* (or 'azaḡ), to propel with oars, to row, Modern Arabic *ḡaddaf*, or 'addaf, part. *mo'addif* (anc. *mo'addif*, or *mo'azzif*, cf. *vothe*, *bose*, *uose*, *vui*, *foi*). *Sua* is without the preformative, cf. 'azaḡa, 'addaf: *balu* seems to have the same prefix as Samoa *pale*, to row, without which is Samoa *ālo* (ps. *alofia*), and *alo-ḡa'i*, to paddle, row, and with another verb, Samoa *taualo*, to row, to keep on rowing.

The foregoing is cited from Dr. Macdonald's work, an excellent example of his dictionary method: I subjoin a few notes from the Melanesian tract as a slight addition to the record.

Mota: *sua*, to paddle; *suava*, a paddling. Buka: *sschue*, *soa*, to row. Matupit: *walua*, to row. Baravon: *value-vue*, to row off. Lambell: *valisó*, to paddle. King: *vulusú*, id. Lamassa: *iavás*, id. Moiki: *ango*, to row, is Polynesian, Samoan *ālo*, under the influence of the local change of *l* to *ng*.

281.

baro-si, baru-si, to rub, to grate; **farofaro**, a thing which rasps.

Samoa: *vālu*, to scratch, to scrape out (as coconuts); *vālu*, to scrape (as taro); *vālusanga*, scrapings (as of taro). Tonga: *valu*, to scrape. Futuna: *valu*, to rub, to rasp, to scrape. Nuguria: *valvalu*, to peel taro. Tahiti: *varu*, *vau*, to shave, to bark a tree, to scratch. Mangareva: *varu*, to scrape fruit, to cut the hair. Rapanui: *varuvaru*, to scrape, to rasp, to shave, to plane, to peel; *hauhau*, to scrape. Marquesas: *vau*, to shave; *varau*, to scrape cooked breadfruit. Maori: *waru*, to scrape, to shave, to cut hair quite close; *waruwaru*, peeled. Hawaii: *walu*, to scratch, to rub, to rasp, to polish. Niuē: *halu*, to scrape, to peel. Fotuna: *wurusia*, to scrape.

Viti: *waluya*, to rub or scrape pandanus leaves to render them pliant for mat-making; *wandrutha*, to clear the nose of mucus, to wipe dirt off a thing with the hand; *varota*, to saw, to file, to rasp.

Mai: *barusi*, to scrape.

Malay: *paras*, to shave, to pare close to the surface. Malagasy: *fara*, to scrape, to scratch, to make smooth.

Arabic: *faraka*, to rub, to grate.

The Proto-Samoan stem is **varus**, which reappears in Efaté, Viti (*wandrutha*), Fotuna, Mai and Malay. While the two Samoan words are akin in sense it would seem that they have different stems, or perhaps that *vālu* is a modification by vowel prolongation entered upon when the closing consonant of the stem had dropped from memory; the evidence for this lies in the objective aspect of the two verbs, of *vālu* *vālusia*, of *vālu* *vālua*. On the other hand the noun of action derived from *vālu*, taro scrapings, is recorded by Pratt in the two forms *valunga* (without the macron) and *vālu-*

sanga. Yet as this distinction of special use by quantity is not carried along even into Nuclear Polynesia we may be justified in considering this an error on the part of Pratt, the more since Père Violette marks diacritically no such distinction.

The fact that the *valu* stem carries the specific action of the rasp (a sprig of coral being the common implement) through Futuna as far as Hawaii removes any obstacle which might exist as to the affiliation of Efaté *farofaro* and Viti *varo* with *valu*. It is interesting to find in Viti three phases of the same stem. The varying treatment of the radical *l* suggests that Viti borrowed and twice repeated the borrowing from different sources. The *varota* points to a loan when the stem held its *r*, and Efaté *farofaro* hints at the loan coming along the migration track which I have segregated as the Viti stream, but in this the closing radical *s* had vanished. The *wandrutha* points to a loan from a source which had *rgrasseyé* and the closed stem, in local terms to Samoa. Then *walunga* indicates a source wherein the stem was open and the *r* had passed definitely into *l*. In our knowledge of the Polynesian waves over Viti this corresponds to the Tongan.

The Semitic is trilateral *frk*. There is a sense resemblance, but stated as a trilateron the Polynesian is *vrs*, the difference in the third element being considerable.

282.

bäu, bao, fäu, fäo, new.

Tonga: *foou, foofou, fofoou*, new. Futuna: *fo'ou*, new, recent. Uvea: *foou*, id. Samoa: *fou*, new, recent; *fa'afou*, to make new. Niuë: *fou*, new, young, recent. Aniwa, Vaté: *fou*, new. Fotuna: *fau*, id. Maori, Nuguria, Hawaii: *hou*, new, fresh, recent. Mangareva, Tahiti, Nukuoro: *hou*, new. Marquesas: *hou*, new, recent. Rapanui, Paumotu: *hou*, young, new. Rarotonga: *ou*, id.

Viti: *vou*, new; *vovou*, young. Rotumā: *fo'ou*, new.

Eromanga: *ite-vou*, new. Malo: *baro*, id. Malekula: *mermer*, id.

Motu: *matamata*, id. Baki: *bou*, id. Bierian: *feu*, id.

Aneityum: *mat*, new, raw. Taupota, Wedau, Galavi: *vou*, new. Kubiri, Raqa: *baubau*, id. Kiviri, Oiun: *bobu*, id.

Malagasy: *vau* (*havauzana*), new. Malay: *baham*, id. Kisa: *wohruwohru*, id.

Arabic: *mahdut'* (*hadat'a*), new. Hebrew: *ḥadas'*, id. Syriac: *ḥdat'*, id. Ethiopic: *ḥadas*, to renew.

No explanation is offered in the Efaté dictionary as to the use of the diæresis on the former vowel. Yet we may be justified in assuming that it is clumsily an indication of long quality, for in Tonga, Futuna, Uvea, and Rotumā the doubled *o* is used for the same purpose.

This stem is soundly identified throughout Polynesia, in Efaté, in Eromanga, in both the Baki and Bierian of Epi, in Malagasy, and less clearly in Malay. Tregear's inclusion of the Kisa *wohruwohru* seems somewhat to reflect Malo *baro*; but in the great facility with which our Sawaiori retain *l-r* we are not warranted in admitting this to the company of *fou*. The Malekula *mermer* may be a variant of *baro*, yet that is hardly likely, since in note 207 we have seen that *p-m* is only a rare possibility.

In Motu and Aneityum we find the intrusion of another stem, yet even this intrusion has both interest and value. Aneityum *mat* new, raw, supplies a sense link between Motu *matamata* new and Polynesian *mata* (256) raw. The position of these two intrusions is very significant. Motu in Torres Straits establishes for us one point of the migration through the south gate; Aneityum is in that more southern region which is a second determining point in the Viti stream.

The Semitic stems in the trilateron *hdt* (*hds*) and it is impossible to bring into association therewith a stem whose only consonant is a sliding labial centered at *f*.

283.

bau-si, fau-si, bau-fau, to fasten together, to plait a mat.

Samoa: *fau*, to tie together, to fasten by tying, the tree (*Hibiscus tiliaceus*) whose bast is used for cord, the kava strainer made therefrom, strings in various uses; *fafau*, to lash on, to fasten with sennit; *faufau*, to fasten on, to tie together. Tonga: *fau*, to fasten up the hair, the name of the hibiscus, the kava strainer made therefrom; *faufau*, to fasten on the outriggers of small canoes; *hau*, to fasten to; *fehauaki*, to tie. Futuna: *fau*, the hibiscus, the kava strainer; *faù, fafau, faùfaù*, to attach, to tie. Niuë: *fau, fafau*, to make by tying. Fotuna: *no-fausia*, to tie, to fasten. Tahiti: *fau*, the hibiscus; *fafau*, to tie together. Paumotu: *fau*, the hibiscus. Nuguria: *hau*, id. Maori: *hou*, to bind, to fasten together; *whau*, a shrub; *whawhau*, to tie. Hawaii: *hau*, name of a tree with a practicable bark. Marquesas: *hau*, the hibiscus. Mangareva: *hau*, id.; *hahau*, to join or tie with cords. Nukuoro: *hau*, the hibiscus, a garland. Mangaia: *au*, the hibiscus.

Viti: *vau*, the hibiscus; *vautha*, to bind together.

Aneityum: *in-wau*, a creeper, a vine. Mota: *vau*, a pandanus; to mat, to plait, to weave.

Malay: *baru*, the hibiscus. Java: *waru*, id. Kisa: *warau*, id.

Malagasy: *fehi, fehizana*, to tie, to knot.

Arabic: *ḥabaka, ḥabikat'*, to weave, to bind, to interweave.

The Proto-Samoan stem is **faus**.

In the utter absence of perspective in which these languages appear before us it would be idle to engage upon the attempt to discover whether in sense the tree or the act of using its bast is primordial. In the records before us the stem carries the tree sense without the verb in the Paumotu, the Marquesas, Nukuoro, and Aneityum; nowhere the verb where the noun does not designate a plant which yields a string. Niuë and Fotuna are the only instances of the verb without the noun, and these may be negligible since the vocabularies on which we rely do not attempt to name this tree.

For comparison I add the following hibiscus names from Micronesia on the authority of Mr. Christian's researches.

Ponape: *kal'au*.

Mortlocks: *kili-fau*.

Ruk: *sili-fau*.

Pulawat: *kini-fau*.

Satawal: *kini-fau*.

Lamotrek: *gili-fau*.

Sonsorol: *giri-fai*.

Uluthi: *gili-fai*.

St. David's: *gini-fai*.

In Indonesia we encounter a stem with an intrusive consonant and, as in 282, we can not accept the identification. The consonant skeleton of Malagasy *fehī*, **fh**, readily associates with the Polynesian **fs**. But this should not lead us astray into the idea that we have an identification of stems. If *au* were diphthongal and *e* a very long vowel it would be a great task to entertain the possibility of a vowel mutation *au-e*. The Malagasy requires even more than this: it requires the extirpation of an inner and protected vowel, for *fau* is not diphthongal and the proof thereof lies in the preduplication *fajau* in Samoa, Futuna, Niuē, Tahiti, Mangareva.

The Semitic **hbk** is certainly far away from the **fs** skeleton.

284.

bila, **bīlafila**, to shine, to lighten, to gleam, to flash, to appear. Cf. **fili** 295.

Samoa: *pula*, *pupula*, to shine. Futuna: *pula*, to fix the eyes on, to regard fixedly. Niuē: *pupula*, to shine (of the eyes), the new moon. Uvea: *pupula*, to shine, to glow, to gleam, to beam. Maori: *kapura*, *mapura*, fire. Tahiti: *pura*, a flash of light or fire, to flash, to blaze. Mangareva: *pura*, a spark, to shine, to glow. Rapanui: *pupura*, to shine, to be bright; *hakapura*, to kindle, to light. Paumotu: *pura*, phosphorescent. Nukuoro: *purapura*, bright. Marquesas: *pupua*, phosphorescent, shining.

Viti: *vula*, white; *vula*, the moon. Rotumā: *hula*, *hual*, the moon. Nifilole: *polao*, the light. Bugotu, Nggela: *pura*, white. Santo: *pula*, light. Baravon: *puapua*, id. Mota: *vula*, white. Nggela, Belaga, Marina, Arag, Mota, Vaturanga, Bugotu: *vula*, the moon. Pokau: *vula*, id. Uni: *bulu*, id. Pokau: *vuia*, id. Uni: *buia*, id. Doura: *huia*, id. Motu: *hua*, id. Keapara, Galoma: *bue*, id. Rubi: *wui*, id. Omba: *vule*, id. Merlav, Gog, Lakon: *vul*, id. Moānus: *mbul*, id. Maewo: *wula*, id. Vuras, Mosin, Motlav, Volow: *wol*, id. Wango: *hura*, id. Ambrym: *ola*, id. Aneityum: *laav*, *lav*, to shine (of the moon).

Malay, Ilocan: *bulan*, the moon. Tringanu: *bulang*, id. Solor: *burang*, id. Molucca: *bulam*, id. Kaili: *bula*, id. Gilolo, Solor: *wulan*, id. Aru: *fulan*, id. Rotti: *fula*, id. Lobo: *fulan*, id. Timor: *funan*, id. Togeian Islands: *fuya*, id.; *buya*, white. Kisa: *ulang*, moon. Magindano: *ulan*, id. Utanata: *uran*, id.

Arabic: *barak*, *bara'*, to shine, to gleam, to flash, to glitter, to appear, to lighten, to open the eyes, to glance at.

The Proto-Samoan stem is **pulaf**.

Dr. Macdonald's identification of this and the lightning stem is, of course, disposed of by the comparison of this material with that assembled in item 295.

In terms of color psychology we are here dealing with the unreduced ray of light, the union of the spectrum colors in white.

Furthermore we are dealing with a singularly elemental people, but little advanced in the arts, not yet emerged from the stone age. The back-

ground of their color life is brown—brown mats to sleep upon, brown thatch to shield them from the gods and from the rain, these the browns of marcescent leaves, brown tapering trunks of coconuts, the brown of seasoned hard wood in the club without which in hand life is not long to be lived, brown skins to look upon in love or hate and to live within. Not merely the deductions of philology these remarks; the eye trained in color values has looked upon these scenes, and those who have gazed upon John LaFarge's sketches from the South Sea have seen a suite of studies in brown.

Their simple arts rarely produce a white; I recall but the white of *siapo* made from the bast of *Broussonetia papyrifera* or *Pipturus incanus* when retted in still waters and bleached in the sun. It is beyond the resources of their few pigments to produce a synthetic white. The red of a few mineral oxides, a purple from a sea mollusc, the yellows of the turmeric, the black of soot, are all that so advanced a people as the Samoans might spread upon a palette. Mix these and brown results.

Bathed in white light they see little white in nature. Their eyes no more than ours may rest upon the sun undazzled by its glory long enough to separate from its heat and glare any true sense of color. But there is one object which never fails to yield a white, the moon. Therefore we are not surprised to note in what number of tongues of these remote islands the word which means to shine, to be bright with the undissolved light beam, should be used to designate the moon. There are fewer exceptions than would appear. Niuē alone among the Polynesian tongues in this record has the moon in this *pula* shine. But a glance farther along at the notes upon item 342 will show that these languages which here omit the moon present it in that record as *masina*, again the shining one, the most conspicuous object in the perfect light, composite white.

Few of these forms in our three nesiothe areas but are self-explanatory. In Rotumā we find the metathesis so characteristic of that language. This, too, I am convinced is found in Aneityum *laav-lav*.

The Semitic trilateron is **brk**. While the resemblance in sense is very close and there is a resemblance in form covering two elements of the consonant skeleton, I hesitate before accepting so violent a mutation as that involved, *f-k*, when we put alongside of **brk** the Proto-Samoan **plf**.

285.

bong, black, dark; **bongi**, **bong**, darkness, night, day in calendar reckoning;

bongien, darkness; **bong**, a dark black powder used in painting.

Fakaafo, Niuē, Uvea, Vaté, Fotuna, Tahiti, Manahiki: *po*, night.

Samoa: *po*, night, day in calendar, blind; *pongipongi*, twilight;

pongisā, darkness. Futuna: *po*, night, day in calendar; *pongia*,

benighted. Maori: *po*, night, a season; *pongia*, benighted.

Hawaii, Mangaia: *po*, night, darkness. Marquesas: *po*, night,

day in calendar, darkness. Mangareva: *po*, night, darkness,

obscurity. Rapanui: *po*, night, late; *po raā*, day in calendar.

Nukuoro: *po*, *pongi*, night. Paumotu: *matapo*, blind (as

elsewhere in Polynesia); *potangotango*, darkness. Aniwa: *kopo*,

night; *pouri*, dark. Bukabuka: *popo*, black. Tonga: *bo*, night.

Nuguria, Sikayana: *bo*, *po*, night, dark.

Viti: *mbongi*, night; *mbombo*, blind. Rotumā: *boni*, night.

Nggao, Belaga, Nggela, Vaturanga, Bugotu, Omba, Sesake: *mbongi*, night. Fagani, Alite, New Georgia, Guadalcanar, Epi: *bongi*, id. Sinaugoro, Galoma, Kiriwina: *bogi*, id. Marina, Southeast Epi: *pongi*, id. Keapara, Galoma, Rubi: *pogi*, id. Western Epi: *ombongi*, id. Bierian: *im-bong*, id. Malo: *bong*, id. Savo: *pong*, id. Duke of York, Matupit, Kabakada, Pala, Baravon: *bung*, id. Malekula: *ambung*, id. Tanna: *la-ben*, id. Santo: *pon*, id. Santo Wulua: *poni*, id. Maewo, Gog, Motlav, Norbarbar: *kmbwon*, id. Arag, Vuras, Lakon: *kpwon*, id. Mota: *mpwon*, id. Lo: *kwon*, id. Volow: *nggmbwon*, id. Aneityum: *ping*, night; *aping*, black; *pöing*, dark. Motu, Rubi: *boi*, night. Dobu: *boiboï*, id. Vaturanga: *bora*, black. Baki: *bongian*, night. Deni: *mbo*, black; *mbu*, night. Nggela: *pungi*, darkness. Bugotu: *puni*, darkness. Bugotu: *puni*, dark. Buka: *abung*, evening; *boni*, night. Pokau, Sariba, Tubetube: *boni*, night. Baravon: *bobotoi*, darkness. Lamassa: *mbung*, dark. Moanus: *pong*, *vong*, day in calendar. Santo: *pon*, id. Baki: *bongo*, id. Bierian: *bong*, id. Eromanga: *po-arap*, evening. Murua: *bogu*, night. Kiviri: *pom*, id. Mukawa: *pomai*, id.

Java, Salayer: *bungi*, night. Macassar: *boetta*, dark; *boeta*, blind. Teor: *pogaragara*, night.

Arabic: *fahuma*, to be black; *fuhum*, black; *fahma-t*, night.

(Darkness—Samoa: *pouliuli*. Niuë, Futuna, Nuguria: *pouli*.

Tonga: *bouli*. Rarotonga, Manahiki: *pouri*. Tahiti: *poiri*.

Aniwa: *ouri* (vide sup.). Hawaii: *poelele*. Marquesas:

potana (vide sup.). Fakaafu, Vaté, Maori: *po*.)

The Proto-Samoan stem is **pongis**, which appears in Samoan *pongisā*. By a continuous process of terminal abrasion we reach successive operative stems in *pongi*, *pong* and *po*, all of which will readily be found in this record, and all except the closed stem *pong* in Polynesia.

The primal sense is the absence of light, just as the common name for day, *aso*, is mediately a sun term and ultimately a word for light. This absence of light is most conspicuous in life by the night; a very easy tropical change establishes the night word out of the dark word.

It marks an advance in capacity for thinking in analogies to recognize in black color and in the black pigment, in which color knowledge first becomes practical, the absence of color, therefore the absence of light. Physiology drawing upon optical physics and the psychology of the color sense in equal drafts is but lately beginning to discover that some rod and cone structure of the retina is responsive to color stimulus and other to the varying stimulus of the amount of light. Yet certain of our islanders have seen the analogy; Efaté *bong* is the black pigment.

To all comes alike the darkness after the day. In the crudity of island life there may come to almost anyone the accident of a life all warfare which may bring night upon the sight, the sunset forever of the blind. To far too many helpless innocents comes ophthalmia neonatorum. Hence *po* darkness (more commonly in the composite *matapo* eye-dark) means also blind.

Daytime is life time, its joys are joys only when the eye can see clearly. When the shadows snap suddenly upon the swiftly fading glow of the sunset the cruel gods are abroad, man in black terror cowers with his kin in a gloomy home about the fat smoke and dull glow of his string of kindled candlenuts. From the dusk of evening until the eastern gleam he will not venture from his shelter except that, under the pricking of his scatomatic dread, in some middle hour he slinks out under the wheeling stars and to the beach where in the darkness and the swirl of the tide not even the whistling gods may see that which might work him harm. Man may live heedless days, but when it comes to the reckoning it is the nights he counts, the nights he has lived through. Here, there, and well nigh everywhere in the Pacific world, *po* as night means calendar day. The Maori goes yet farther: *po* may mean to him a season, it may mean the obscurity of eternity.

We now pass to the consideration of the forms of this stem beyond the Polynesian limits. Our records are too scanty to reveal in Melanesia the existence of the *pongis* stem, but *pongi* is very common, *pong* is of equal frequency, *po* is rare.

We observe a group of forms in which the initial consonant is subjected to a wide yet systematic variation. This peculiarity is known as the Melanesian *q*. It is a composite of *k* and *b* and *w*; in this composite *k* may become *ngg*, *b* may become *mb* or *p*. It is not to be interpreted as the effort on the part of Melanesians to compass an unwonted Polynesian sound, for it is of far greater frequency in Melanesian words for which we can find no affiliation with Polynesia. Rather are we to regard it as showing the struggle in sound evolution by a primitive people in the genesis of their speech who are coming into first possession of a labial mute and whose untrained buccal muscles reveal to us the wrestling. And if we can thus look upon the birth of one sound in human speech may we not indulge ourselves in the fancy that man went through a similar struggle to acquire each of the consonant sounds in his phonetic system? At last across ages, uncountable ages, we see the first of speaking men lifting himself above the crying animal when he is teaching the muscles of his tongue to move its tip here and there within the mouth to give him some clumsy *l* or fugitive *r* which is to give him speech, and upon speech knowledge, and perhaps to some chosen ones of his remote descendants the promise of intelligence.

It is not without interest that we are in a position to observe the Melanesian rounding out his phonetic range by this last gift of the labial mute, even though it strike our ears as anything but sweet concord of sounds. In the Polynesian material here under discussion we encounter the Melanesian *q* but twice besides its presence in the variation of this stem, namely: *nafa* (157) a drum Malekula Uripiv *nambwi*; and '*upenga* (151) a net Motlav *kmbweng* Volow *nggmbweng*. An index of its frequency in Melanesian will be seen in the fact that in Codrington's Mota dictionary there are no less than 337 principal entries under *q*-initial, and yet Mota has already attained to the possession of *v* and *p*.

The Aneityum forms give in *pöing* (perhaps a 1243 metathesis of *pongi*) the transition to *ping*, the only wide variant from the radical *o*. Motu *boi* is *bongi* with elision of *ng*; this is found so uniformly (309, 332, 346, 350) that

we have but a single instance (151 *ng-n*) in this language of any other treatment of the palatal nasal, and that a doubtful one. Vaturanga *bora*, Baravon *bobotoi*, and Eromanga *po-arap* are evident composites on the *po* stem. Deni is the only language embraced within our inquiry in which the attempt has been made to differentiate *po* sense variety by vowel variation.

In Indonesia we find the *pongi* stem in Java and Salayer, the other identifications are *po* composites.

Revert now to our Proto-Samoan stem **pongis**, skeletonized to **pngs**. What can Semitic **fhm** have to do therewith?

286.

bon, **bono**, to be shut, closed, stopped; **bono-ti**, **bonu-ti**, **bunu-ti**, to shut, to close, to plug, to stop, to block up.

Samoa: *puni*, a place inclosed to catch fish; *pupuni*, to shut, to inclose; *punitia*, to be shut up, inclosed. Niuē: *pupuni*, to shut in, to inclose; *ponoti*, to cork, to calk, to stop up, to close. Uvea: *pupunu*, to shut in, to inclose. Nuguria: *hakapunu*, to stop up. Maori: *puni*, stopped up. Tahiti: *puni*, to be inclosed, to hide. Hawaii: *puni*, to inclose. Mangaia: *puni*, to hide. Mangareva: *pupuni*, id. Paumotu: *punipuni*, to take shelter. Marquesas: *pupuni*, *punipuni*, to hide oneself, to squat. Nukuoro: *pono*, to shut. Tonga: *buni*, closed, shut; *bubuni*, *bunibuni*, *bubunu*, *bunubunu*, to close, to shut. Fotuna: *buna*, to block up.

Viti: *vuni*, hid, concealed; *mbonota*, *vonota*, to stop up water by a dam; *vono*, a canoe plank.

Epi: *mbin*, to block up. Mota: *wono*, *wonot*, to close, to fill up, to make solid, to oppress.

Malay: *buni*, to hide, to conceal.

Hebrew: *baham*, *bahan*, to shut, to cover, to conceal.

The Proto-Samoan stem is **punit**.

The insecurity of the vowel in the Polynesian is of no little importance. Niuē *ponoti* is Samoan *fonoti*. Uvea gives us *punu*, Tonga *bunu* for *puni*. Nukuoro *pono* recalls Niuē. Fotuna *buna* is a yet wider variant. In Viti we find not only *vuni* for *puni*, but in the homogenetic of *fono* we have *vono* and *mbono*, which again recalls Niuē. Epi *mbin* is identifiable.

Efaté has not the exact analogue of *puni*, which would be *buni*. But its *bono* recalls Niuē, its *bunu* recalls Tonga.

It is not until we examine the Mota words that we begin to see the reason for all this shifting; *wono*, *wonot* has the *fono* form but the *puni* sense. It functions as a transition form to account for all this variation heretofore noted; it points to a time when **punit** and **fonot** were themselves divided by so slight a distinction as to escape alien notice. The Polynesian has yet another root meaning to plug, to stop up, **monot** (71). These three have the common factor *not*, or *nit* as a slight variant. The conclusion is irresistible that the general sense of closing inheres in *not*, that the other and variable elements are in some sense limiting. Now since we find *pu* in the sense of a self-existent hole, *pu-nit* is hole-closing when the hole is always there. The *fo*-stem we find in *foa*, to chip as a hole in an eggshell,

to break the head; *fo* then is a hole not self-existent, but the result of accident or design; *fo-not* is hole-closing when the hole has been made where it does not belong, therefore *fono* is to patch. The root *mo* we find in *moa* and more specifically in *moalili*, the soft flesh in the round hole which appears when the operculum is prized out of the shell of *Turbo petholatus*, *momo'ulu* clitoris (cf. Maori *koru* a loop, bight, or fold); *mo-not* is the closing of a round hole, putting a plug into the open eye of a coconut as the common water-container.

Malay *buni*, in form close to the Polynesian *puni*, has a sense, a particular result of closing upon the object included, which reappears not in Proto-Samoan but in the Tongafiti migration in Tahiti, the Marquesas, Mangaia, Mangareva, the Paumotu.

If we confine ourselves to the Proto-Samoan stem **punit**, **pnt** is in no agreement with Semitic **blm**, far less is the **not** root which has just been evolved from these several forms.

287.

borau, to ride, to be carried (on a canoe, ship, horse, vehicle or other thing), to voyage.

Samoa: *folau*, a voyage, a ship, to go a voyage, to die. Tonga: *folau*, a voyage, a fleet, a voyager, to sail. Futuna: *folau*, a navigator, to navigate, to go a voyage. Niuë: *folau*, to commit suicide by jumping into the sea. Uvea: *folau*, to navigate. Fotuna: *ko-forau*, to go a voyage. Moriori: *wharau*, a ship. Rapanui: *horau*, to hasten, to run to.

Viti: *vondo*, to embark, to go on board, to ride.

Matupit: *parau*, a ship. Ambrym: *bulbul*, a boat. Malekula: *foro*, to navigate. Mota: *walawalau*, to paddle all together; *walaua*, to collect things for a voyage.

Tagalog, Visayas: *parau*, a boat. Malay: *prahu*, *prau*, id.

Arabic: *markab'*, a ship, a vessel. Ethiopic: *markab*, id.

The sequence of the Efaté definition is, of course, inverted, the voyaging sense being primal, and the extension of the definition as "to be carried . . . on a horse, a vehicle" can have had significance only since the immediately modern introduction by Europeans of horses and their concomitants.

A strange admixture is twice found in Nuclear Polynesia. The word in Samoan which means to sail means also to die. In Niuë the only signification of *folau* is to commit suicide by jumping into the sea. The vocable is of the most obscure; probably a distinct word in all but form is involved, for we can not imagine any seafaring race so pessimistic as to see death the goal of their voyaging and thus to develop such a secondary significance.

In Melanesia we find two distinct epochs of the stem. The earlier and more worn phase is shown in Malekula *foro*. This forms an easy transition to Viti *vondo* so far as the vowel element is concerned, and the *l*-nd mutation is not without warrant in our table of consonant mutation. Aneityum *bulbul* is a form which to abrasion adds vowel degeneration. The Mota *walau* is nearer to the *folau* stem in form, its two senses are easily recognizable particulars of the general meaning, and, so far as the general theory of duplication may be considered to hold in Mota, the duplicated *walawalau* shows the division of the stem elements as *folau*-*u*. Matupit

parau is of most modern type; in form and meaning it is exactly Indonesian; I have no hesitation in assigning it to the Post-Polynesian period and to Malaysian rovers, all the more since Matupit lies in the jaws of the eastern gateway. The explanation of Moriori *wharau* eludes our search. With this exception the word is Nuclear Polynesian, and Moriori is a curious survival of an uncomprehended migration earlier than the current Maori, before whose coming it was driven onward to the chill of the Chatham Islands.

It is impossible to reconcile with this stem of **fl** the Semitic **mrkb**. Not only is the latter of a far more complicated nature, but the only point in which it suggests **fl** is in the *r* and the *b*, and these are not only in an order the reverse of **fl** but they are parted as well by *k*, one of the most permanent of consonants as it is one of the first acquired.

288.

bulo ki, bulosi, bulusi, bulisi, to turn, to twist; **tafolo**, to be turned, twisted; **tafulus**, to be turned; **bolonga, tafilonga**, to turn itself (as a thing sinking in water); **bulora, filora**, twisted, confused (as a lot of things turned or twisted about).

Samoa: *fuli*, to turn over, to capsize; *fulifuli*, to roll over and over; *mafuli*, to be turned over, upset; *tafuli*, to turn over. Tonga: *fulihi*, to turn over, to upset, to reverse; *mafuli*, to be capsized; *tafuli*, to move around. Futuna: *fuli, fulisi*, to turn, to overturn, to reverse; *mafuli*, id. Niue: *fuluhi*, to turn, to overturn; *mafuluhi*, turned over. Uvea: *fuli, fulihi*, to turn over, to overthrow. Hawaii: *huli*, to turn in general, to turn over and about. Maori: *huri*, to turn around, to overturn, to roll over; *hurihuri*, to turn over in the mind, to ponder. Tahiti: *huri*, to turn over, to roll. Sikayana: *huri*, to turn over. Rapanui: *huri, hakahuri*, to turn over; *tahuri*, to pirouette. Rarotonga: *uri*, to turn over, to roll over. Marquesas: *hui*, to turn over, to roll.

Viti: *voli*, to go around; *volivoli*, to revolve.

Aneityum: *uhuri*, to dig or root as a pig. Motu: *huro*, a grindstone.

Malay: *pulâs*, to wring, to wrist, to turn, to turn round, to turn aside out of the way. Java: *pulis*, id. Malagasy: *vorivory*, round, circular.

Hebrew: *palas*, to turn round, to twist, to spin. Arabic: *falakat*, a spindle.

The Proto-Samoan stem is **fulis**.

We are therefore in no doubt as to the Efaté forms involving the sibilant. The remaining forms may with varying degrees of certainty be connected with forms in *s*.

In Polynesian, as is quite common, the **fulis** stem is readily discoverable in Nuclear Polynesia. The Tongafiti languages use the abraded form and betray no recollection of the earlier closed stem.

The Viti *voli* is not quite satisfactory as an identification. Its definite transitive is *voli-ta*. This may suggest a stem **volit**, yet in the Viti verb we can never be quite certain that *ta* may not have acquired sufficient identity as a mere termination to be applied to any open stem without consideration of what former closing consonant may have been abraded.

Our Melanesian material is so scanty and so widely separated, in form and in sense so uncertain, that we include Aneityum and Motu without argument, but solely on the score of resemblance.

In Indonesia, on the contrary, we find in Malay and in Java the most satisfactory identifications, and Malagasy quite probable.

The Semitic **pls** and Polynesian **fls** are distinctly coordinated through Malay **pls**. They may therefore be accepted as at least resemblances.

289.

bulu-ti, to plaster, to overspread with some sticky substance (as oil, lime, paint, pitch), to cover with a plaster or poultice (as a wound); **nabulu**, a plaster; **bubulu**, **bulubulut**, **buloki**, **mabulu**, to be sticky (as a plaster).

Samoa: *pulu*, gum, breadfruit gum, glue, coconut husk, resin; *puluti*, to glue, to pitch; *pupulu*, to apply gum, to interpose, to mediate (cf. *puluwanga*); *pulupulu*, a large cloth about the whole body; *pulupuluta'i*, to cover up so as to take care of. Tonga: *bulu*, a gum used in calking canoes, coconut husk; *buluji*, birdlime, paste, plaster, to paste; *bulubulu*, a shawl, a cloak, to cover the back and shoulders; *bubulu*, slimy, adhesive. Futuna: *pulu*, coconut husk, gum, resin, pitch, all sticky stuff; *puluti*, to cement, to plaster, to pitch; *pupulu*, pitch; *pulupulu*, cloak, wrapper. Niuē: *pulu*, coconut husk, fiber, sennit. Uvea: *pulu*, pitch. Hawaii: *pupulu*, adhesive, soft; *pulu*, scales from fern fronds used as plugging or stuffing material. Maori: *puru*, a plug, a cork, to plug up, to stuff up, to calk. Tahiti: *puru*, coconut husk. Rarotonga: *puru*, coconut fiber used as a plug for calking, anything used to calk with. Mangareva: *puru*, coconut husk, the almond of the pandanus. Rapanui: *puru*, a covering, to cover. Marquesas: *puu*, a band of tow made of coconut fiber.

Viti: *mbulu*, an external application, a thing that covers or buries, coconut husk; *mbuluta*, to cover with earth, to bury, to repair an injury, to apply an external remedy; *bulubulu*, a grave, that which covers or buries, a peace offering. Rotumā: *pul*, gum; *pulpul*, gummy.

New Britain: *pulpul*, a cloth wrapped round the body. Mota: *pul*, *pulu*, gum, to stick; *pulut*, to stick together; *gapulut*, glue, paint. Pala: *būhūt*, to smear. Merlav: *mbulut*, to make to stick; *gambulut*, glue. Norbarbar: *vambulmbul*, to make to stick. Malekula: *burji*, to plaster; *buruj*, sticky. Malo: *bulia*, to stick. Java: *pulut*, gum, birdlime. Malay: *pulur*, the pith of plants, farina.

Hebrew: *kapar*, to cover, to cover over; *koper*, pitch. Arabic: "afara, to cover over, to pardon (sin).

The Efaté words are all in satisfactory accord with one or other of several stems which in Polynesia interlace within the abraded form *pulu*. These we shall examine with the aid of the Proto-Samoan stem where that is discoverable.

pulut, gum, pitch, sticky, to stick. Samoa, Tonga, Futuna, Uvea, Viti (?), Rotumā, Efaté, Mota, Merlav, Norbarbar, Malekula, Malo, Hawaii.

pulut (this ascription resting solely on Samoa *pulupuluta'i*), a large article of clothing. Samoa, Tonga, Futuna, Viti (?), New Britain.

puluv, to interpose, to mediate. Samoa.

pulu, coconut husk. Samoa, Tonga, Futuna, Niuē, Viti, Maori, Tahiti, Rarotonga, Mangareva, Marquesas, Hawaii.

The **pulut** stem is thus seen to belong to the Proto-Samoan migration. If the identification in Hawaii is good we have this stem to add to our fragments of evidence showing a Proto-Samoan migration from Samoa to Hawaii.

The **pulu** stem is common to both migrations.

In Melanesia the **pulut** stem preserves its *t* except in Malo.

In Indonesia the Java *pulut* is exact in form and sense. Malay *pulur* may be connected with the **pulu** stem, but the sense is almost impossible to reconcile.

The Semitic **kpr** can not be said to stand in strong likeness to Polynesian **plt**.

290.

fafine, bite, fite, matu, woman, female.

Samoa: *fafine*, *māfine*, a woman, wife, female; *afafine*, daughter; *tamafafine*, id.; *tuafafine*, sister. Tonga: *fefine*, *fafine*, woman; *ofefine*, daughter; *tuofefine*, sister. Fakaafu, Futuna, Uvea, Sikayana, Vaté, Moiki: *fafine*, woman, female. Lūenūia: *fafini*, id. Niuē: *fiifine*, id. Nuguria: *tahine*, wife. Maori, Hawaii: *wahine*, woman, female. Tahiti, Manahiki: *vahine*, id. Marquesas: *vahine*, *vehine*, id. Rarotonga, Tubuai, Bukabuka: *vaine*, id. Tongarewa: *oahine*, id. Nukuoro: *ahine*, *fefine*, id. Mangareva: *veine*, *ahine*, *aine*, id. Aniwa: *tafine*, *fine*, id. Fotuna: *fine*, woman, female. Paumotu: *vahine*, a wife; *mohine*, a woman. Uvea: *finematua*, mistress. Tahiti: *mahine*, daughter. Tonga: *fine*, women. Mangareva: *mohine*, daughter. Maori: *hine*, girl. Rapanui: *nuehine*, old woman; *tamaahine*, daughter.

Viti: *yalewa*, *alewa*, woman. Rotumā: *hoina*, id.

Solomon Islands: *fafini*, a sister. Fagani: *fefene*, woman. New Ireland (Duffield): *fiifine*, *feekeen*, id. Makura, Arag, Omba, Uni, Kabadi, Sinaugoro, Hula, Keapara: *vavine*, id. Mota: *vavine*, *tavine*, id. Nggela, Bugotu: *vaivine*, id. Belaga: *vaivine*, *vinekama*, id. Duke of York, New Britain: *wawina*, id. Tavara, Wagawaga, Awalama: *wawine*, id. Taupota, Wedau, Galavi, Boniki: *wavine*, id. Dobu: *waine*, id. Suau: *waihin*, id. Mukawa: *wasike*, id. Baravon: *wawin*, id. Roro, Uni, Galoma: *babine*, id. Oiun: *babin*, id. Mekeo: *pāpie*, id. Rubi: *gaiine*, id. Nada: *iina*, id. Murua: *vine*, id. Kiriwina: *vivila*, id. Port Moresby, Motu: *hahine*, id. Redscar Bay:

ahine, id. Ambrym: *vihi*n, id. Suau, Sariba, Tubetube: *sine*, id. Dobu: *sinesine*, id. Mugula: *sina*, id. Dobu: *ine*, id. Eromanga: *sivin*, id. Moánu: *pēin*, id. Uea: *in*, a girl. Nifilole: *singenda*, woman. Pala: *hahin*, id. Volow: *linggmbweven*, id. Motlav: *lkmbwovin*, id. Lo: *lakwavina*, id. Mota: *vine*, feminine. Malo: *vavini*, woman, female. Malekula: *ne-ven*, old woman, young woman; *febin*, female; *nev-seven*, woman, female; *febinin*, man's sister. Tanna: *nau vene(n)*, man's sister. Baki: *buvino*, female; *kovivine*, man's sister. Bierian: *fafine*, woman, female; *fefine*, man's sister; *buvino*, female.

Sulu: *fina*, a woman. Massaratty: *fineh*, id. Mayapo: *gefineh*, id. Ahtiago: *vina*, id. Teor: *mewina*, id. Bouton: *bawine*, id. Java: *winih*, the female of animals. Sanguir: *mahoweni*, woman. Waigiou Alfuros: *bin*, id. Malay: *bini*, id. Gah: *binei*, id. Cajeli: *umbinei*, id. Salibabo: *babineh*, id. Mysot, Waigiou: *pin*, id. Gani: *mapin*, id. Saparua: *pipina*, id. Liang, Morella, Lariko, Awaiya, Caimarian: *mahina*, id. Teluti: *ihina*, id. Madura: *bahini*, id. Salayer: *baini*, id. Batu-merah: *mainai*, id. Silong: *benaing*, id. Macassar: *banie*, daughter. Ilocan: *babai*, woman. Malagasy: *vavy*, female; *vehivavy*, woman.

Of the Efaté forms *fafine* is in full accord with the Polynesian. Our author proposes *file* as a mutant of *fine*; the material shows but a single instance of *n-t* mutation, *namu* (328) mosquito Alo Teqel *tom*; *file* and *bite*, if coordinated with *fine*, stand by themselves in a class apart in the handling of this stem.

The primal stem is *fine*, and this it is which carries the sex sense. We find it in independent existence in Tonga, Uvea, Maori, Fotuna, Aniwa, Uea, Mota, Tanna, Murua, and in composition away from the type forms in Belaga *vinekama* and in Moánu.

The most common form in which this stem appears is *fafine*. Neglecting the range of variation of the *f*, *fafine* is found throughout Polynesia and Melanesia, less frequently in Indonesia. Upon this as a secondary stem several compounds are erected.

Mafine is a secondary stem which is found in Samoa, the Paumotu, Tahiti, and Mangareva.

Tafine is found in Aniwa and Mota.

Sifine is found in Malekula *nev-seven*, Eromanga *sivin*, and metathetic in Ambrym *vihi*n.

In Volow, Motlav and Lo we find a composite of *fine* with another stem which it is impossible to identify. Nifilole *singenda* seems scarcely possible of correlation, and Viti *alewa* is also anomalous.

The Indonesian forms are readily reducible to the foregoing forms, *fine*, the most common, and *mafine* more frequent in reference to *fafine* than in the Pacific.

Macdonald's explanation is that *fafine* is a composite wherein the first member is human being and the second characterizes it as feminine. We may not yet isolate the particular sense of *fa*, *ma*, *ta*, which we find in our

three island areas, but of the three only one and that the least frequent one, *ta*, is susceptible of association with any word meaning man, *tangata* of the human being, while in *tane* we have the sex antithesis of *fine*. Dr. Macdonald's effort is labored but unconvincing.

291.

fai, vai, nīfai, noai, n'uai, n'wai, nai, n'ai, ai, water.

Samoa, Fakaafo, Tonga, Futuna, Niuē, Uvea, Nukuoro, Tahiti, Rarotonga, Tongarewa, Marquesas, Mangareva, Fotuna, Nuguria, Vaté: *vai*, water. Rapanui: *vai*, juice, liquid, water. Aniwa: *vai, tavai*, water. Maori, Hawaii: *wai*, id. Sikayana: *wai, wuai*, id.

Viti: *wai*, water. Rotumā: *vai, voi*, id.

Motu: *vai*, river. Omba, Ulawa, San Cristoval, Mwala, Saa, Bululaha, Arag: *wai*, water. Sinaugoro, Hula, Keapara, Galoma: *wai*, river. Moānus: *uai*, water. Alite: *kuai*, id. Aneityum: *in-wai*, id. Nifilole: *woi*, id. Tubetube: *waiila*, id. Sariba, Massim: *waira*, id. Taupota, Wedau: *waira*, water, river. Kiriwina: *waia*, river. Misima: *weil*, river; *weweil*, water. Panaieti: *wel*, river; *wewel*, water. Tubetube: *wawei*, water. Mugula, Suau, Awalama, Kwagila: *goila*, id. Tavara: *goila*, water, river. Sesake, Southeast Epi: *noai*, water. Bierian: *nuai*, id. Epi, Baki: *ue*, id. Ambrym, Uni: *we*, id. Nengone, Duaru: *wi*, id. Yengin, Balade: *ue*, id. Murare: *qui*, id. Nikete: *que*, id. Malekula: *n-ue*, id. Tanna: *nui*, id. Eromanga: *nu*, id. Motlav, Volow: *mbe*, id. Maewo, Merlav: *mbei*, id. Roro: *bei*, id. Bugotu: *mbea*, id. Nggela: *beti*, id. Roro, Mekeo, Uni, Pokau: *vei*, id. Doura: *vei*, water, river. Kabadi: *veina*, water. Vanua Lava, Norbarbar, Lo: *pe*, water. Mota: *pei*, id. Marina: *pei, tei*, id. Baravon: *tava*, id. Nada, Murua: *rai*, river.

Buru, Ceram, Salibabo, Cajeli, Mayapo, Massaratty, Amblaw, Sapa-rua, Ahtiago, Solor, Sulu: *wai*, water. Waigiou Alfuros: *ue, we*, id. Allor: *we*, id. Togeian Islands: *uè*, id. Rotti: *ue (oe)*, id. Bajū: *voi*, id. Vaiqueno East: *hoi*, id. Waigiou: *wayer*, id. Gani: *waiyr*, id. Mysot: *wayr*, id. Liang: *wehr*, id. Teor: *weha*, id. Batumerah, Morella: *weyl*, id. Awaiya, Caimarian: *wäeli*, id. Teluti: *welo*, id. Dorey: *waar*, id. Kaioa Island: *woya*, id. Malay: *ayer*, id. Menado: *aer*, id. Champa: *aya*, id. Goram: *arr*, id. Silong: *awaen*, id.

Hebrew: *mē*, water. Ethiopic: *mai*, id.

In general I am most reluctant to admit the possibility of diphthongs in Polynesia, at least in Nuclear Polynesia. In the case of this word, *vai* has always been received by my ear as two vowel sounds and in perfect distinction from *vae* the foot. Yet without receding from my position in regard of diphthongs we shall find it a great simplification of our analysis of the *vai* mutants to adopt a working hypothesis that, even if not properly a diphthong in Polynesian speech, the *ai* of *vai* has been accepted by its Melanesian borrowers as of diphthongal value. The need for this assump-

tion is that *vai* undergoes a series of vowel changes which would not be possible unless its *ai* were regarded as a vocalic unit and susceptible of variation as such.

The Efaté forms are reducible to four types, *vai*, *fai*, *wai*, *ai*; we shall discuss our collected material in relation to these types, this discussion referring only to the initial consonant.

vai. This is the most common type in Polynesia, is absent from Melanesia, and is found but once in Indonesia, Baju *voi*.

fai. Efaté alone shows this type. In general it is to be said that the spirant rarely alters from sonant to surd, our only examples being *lava* (307) very Fagani *rafa*, and *vivini* (242) to crow Ambrym *nofin* to whistle. The change from surd to sonant is of great frequency.

wai. This is found in Polynesia only in Maori, Hawaii, Viti, Sikayana. It is the most common type in Melanesia and Indonesia. In the former it is found in Omba, Ulawa, San Cristoval, Saa, Arag, Bululaha, Moánus, Aneityum, Nifilole, Baki, Ambrym, Nengone, Duaru, Yengin, Balade.

A secondary Efaté form is *noai*, *n'uai*, *n'wai*, the *n* probably functioning as article. The same prefix, and probably of the same value, we find with *wai* in Sesake, Bierian, Southeast Epi (probably the Bierian), Malekula, Tanna, and Eromanga. These *n*-forms are found nowhere outside of Melanesia.

ai. This type is exclusively Efaté. It is normal to find the labials when in mutation so extensively—we should interpolate the aspiration form of this series in Vaiqueno, *hoi*—progressing to extinction; yet this Efaté type is our only instance in this stem. Over against this we set for comparison Eromanga, which has lost its radical vowel and exists only by the complete alteration through the *w* semivowel to vocalic *u*; the chain is a complete one in the links Bierian, Malekula, Eromanga.

We have already examined a secondary *wai* type in *n*. We find yet another secondary *wai* type in *k*, a prefix whose purpose does not appear. It occurs in Alite and in New Caledonia in the languages of Murare and Nikete. This, too, does not pass outside of Melanesia.

Before entering upon the discussion of forms consonantly less obvious it will be proper here to engage upon the consideration of the vowel forms.

- ai.** Polynesia altogether, Viti, Rotumā, Efaté, much of Melanesia, most of Indonesia.
- oi.** Rotumā, Nifilole; Baju, Vaiqueno East, Kaioa Island.
- e.** Baki, Ambrym, Yengin, Balade, Nikete, Malekula; Waigiou Alfuros, Allor, Togeian Islands, Rotti.
- i.** Nengone, Duaru, Murare, Tanna.

Having thus acquainted ourselves with the vowel variability we may recur to the consideration of a second group of Melanesian homogenetics. In these the vowel has changed to *e*, or to *ei* which is the same in effect. The consonantal change is from spirant to mute, to *b*, *mb*, *p*. The table of variations will afford abundant store of examples of this change. We may, then, having confirmed both consonant and vowel mutation, accept Mota, Marina, *pei*; Maewo, Merlav, *mbei*; Vanua Lava, Norbarbar, Lo, *pe*; Motlav, Volow, *mbe*; Bugotu, *mbea*. Marina has not only *pei* but a

synonym *tei* as well; we are without evidence to support a mutation from labial to lingual among the mutes and will not venture to suggest that *tei* is homogenetic with *pei*, but it certainly means the same thing. This may explain the Nggela *beti*, a determinant compound of the two stems which, among others, have one like meaning (14 Journal of the Polynesian Society, 41). We are left with Baravon *tava*; it is permissible to see in *va* an abraded derivative of *vai*; the *ta* may be associable with Marina *tei*, with Nggela *beti* and, even more remote, with Aniwa *tavai*, of course with the possibility that in the last form the *ta* may prove to be the weak demonstrative functioning as article.

We have already examined such of the Indonesian variants of the *vai* stem as have been found in concord with the general mutation. There yet remain for us distinctively Indonesian types of mutation. These involve assumption of a final liquid. Based on the *wai* type we may follow this from Waigiou *wayer* through Gani, Mysot, Batumerah, Morella, Awaiya, Caimarian, Teluti, Dorey, Liang, Teor. A shorter series based on the *ai* type begins in Malay *ayer* and runs through Menado, Champa, and Goram, with Silong *awaen* in some way connected.

The initial consonant of the *vai* stem has run a long course, even to extinction, in our three island areas, but nowhere has it approached an *m* which might give warrant for accepting the proposed Semitic identifications.

292.

fanua, inhabited country, land.

Samoa: *fanua*, the land, the earth, the ground. Aniwa: *fanua*, the whole earth, the land, the soil. Fotuna: *fanua*, land, country. Futuna: *fenua*, people, race, nation, land, country. Uvea, Tahiti, Sikayana, Moiki, Fakaafu, Vaté: *fenua*, land, country. Nuguria: *henua*, id. Marquesas: *fenua*, *henua*, id. Rapanui: *heenua*, id.; *puheenua*, soil. Paumotu, Manahiki: *henua*, land, country. Maori: *whenua*, the whole earth, a country, land, the ground, the soil. Bukabuka: *whenua*, land. Rarotonga, Bukabuka: *enua*, id. Mangareva: *enua*, land, used to denote shallow places in the sea. Tonga: *fonua*, the whole earth, a country, the land, the soil. Niuē: *fonua*, land, soil, mold. Hawaii: *honua*, id.

Viti: *vanua*, a land, a region. Rotumā: *hanua*, land.

Arag, Vanua Lava, Marina, Maewo: *vanua*, land. Sesake: *vanua*, a place, a village. Malo: *vanua*, land, house. Mota: *vanua*, a place, island, land, village. Kabadi: *vanua*, village. Pokau: *vanua*, land, village. Uni: *vanua*, land. Omba: *vanue*, land. Lakon: *vanu*, id. Baki: *venuo*, land, country. Duke of York: *wanua*, id. Galoma: *banua*, village. Mekeo: *ɸangua*, land, village. Panaieti: *ɸangua*, land. Ugi: *vanua*, *hānua*, id. Laur: *hanūa*, a place. Lambell: *hānua*, id.; *hānua*, a town. Motu: *hanua*, a village. Tubetube: *ianua*, land, village. Suau: *eanua*, village. Lamassa: *fānu*, a place; *fanū*, a town. Bierian: *fanua*, land, country. Roro: *anua*, land. Rubi: *anu*, village. Epi: *venua*, land. Santo: *venua*, a house, a village. Malekula: *fenu*, land. Retan:

vene, island. Saa: *henua*, *henue*, a village. Vanikoro: *jenua*, land. Fagani: *finua*, a place. Nggela: *mbona*, id. Norbarbar: *vonio*, island. Pak, Sasar, Vuras: *vono*, land. Leon: *vono*, country. Motlav: *na-vno*, land. Baki: *vonua*, land. Sinau-goro, Hula, Keapara: *vanuga*, village.

Malay: *bânua*, a land, a country. Bicol: *banua*, a town. Visayas: *banua*, a village. Bugi: *wanua*, land. Malay: *benua*, a region. Togeian Islands: *benua*, a house.

Hebrew: *banah*, to build, as a house; *banu'*, built; *binyaha*, building.

Dr. Macdonald makes this note:

The Santo word has best preserved the primary meaning "house" or "building"; then a country, district or land is called *bânua*, or *janua*, because, like a house or village (or building), it is the dwelling-place of men, or place of buildings.

And all this because Hebrew *banah* is to build! As to the primary meaning, *circumspice*.

In Polynesia the structural idea finds no place whatever; *janua* means the land, from the mold at one's feet (Samoa, Aniwa, Maori, Tonga, Niuë, Hawaii) to the land in which one lives (Samoa, Aniwa, Fotuna, Futuna, Uvea, Tahiti, Sikayana, Moiki, Fakaafo, Vaté, Marquesas, Paumotu, Manahiki, Maori, Bukabuka, Rarotonga, Tonga, Viti, Rotumā, Niuë, Hawaii), to the whole world of many lands (Aniwa, Maori, Mangareva, Tonga). And what has the Hebrew builder to do with even the least of these?

In our Polynesian material the variations affect but the first syllable. Its radical vowel is *a* and it varies to *e* in eastern Polynesia and in the islands of the Western Verge; to *o* in Tonga, Niuë, and Hawaii, again a memorandum of the direct migration from Nuclear Polynesia to the northern archipelago. The consonantal variations are all in the lingual series upward, from *f* to *v* to *h* to *wh* to extinction.

In our examination of the Melanesian material we shall observe the same three vowels; *a* is very common; *e* is found in Baki, Epi, Santo, Malekula, Retan, Saa, Vanikoro; *o* is found in Nggela and the Banks Islands. Fagani gives us *finua*, the only occurrence of *i* in all our material. The consonantal variation of the first syllable gives us *f* in Lamassa, Bierian, Malekula, Vanikoro, Efaté, Fagani. The common form is in *v*, found in Arag, Vanua Lava, Marina, Maewo, Sesake, Malo, Mota, Kabadi, Omba, Lakon, Baki, Ugi, Epi, Santo, Retan, Norbarbar, Pak, Sasar, Vuras, Leon, Motlav. The *h* form is in Ugi, Laur, Lambell, Motu, Saa. The *w* form is found only in the Duke of York group. Nggela gives us a downward stronger variant in *mbona*.

Polynesia admits its variability only in the first syllable, so in general does Melanesia. But there are instances where other parts of the word are affected. Final *a* becomes *e* in Omba, Saa, and vanishes in Lakon and Lamassa. In Baki final *a* becomes *o* in *venuo*; Norbarbar *vonio* establishes an alteration of *u* in the penult, which proceeds to extinction in *vono* of Pak, Sasar, Vuras, Leon, Motlav, and indicates the same loss in Nggela *mbona*.

The Indonesian identifications modify only the first syllable, the vowels are *a*, *e*, *o*, the consonants *b*, *v*, *w*.

In conclusion we are to note upon what slight ground rests the statement that the primary signification is house. This meaning is found only in

Malo, Santo, and the Togeian Islands. Knowing this to be a loan word we are better warranted in regarding it as a misunderstanding or an intentional misapplication on the part of the borrowers, three among fifty-odd. I do not regard the use of *janua* for town or village to arise from the rare house sense. The village sense is found in Sesake, Mota, Kabadi, Laur, Lambell, Motu, Santo, Saa, Fagani, Bicol, and the Visayas. Rather does it seem to me to record the fact that our connotation of land is wider by far than is within the scope of these poor islanders. When one lives at the edge of the jungle and has to wage a steady fight against the voracity of the advancing timber the dread forest is not a land or a country, it is the dripping abode of the gods ever vengeful. Land is only the place of human habitation, hence a village or a town, the designation varying as foreign observers may choose to record their impression on a volumetric scale which is always loose.

293.

fātā, uēnr', uērē, uētē, kofeta, a bench, shelf, stand, platform.

Samoa: *fata*, a raised house in which to store yams, a shelf, a handbarrow, a bier, a litter, an altar, to carry on a litter; *fatāmanu*, a scaffold. Tongan: *fata*, a loft, a bier, a handbarrow, to carry on a bier; *fataki*, a platform. Futuna: *fata*, a barrow, a loft; *fatataki*, two sticks or canes attached to each other at each side of a house post to serve as a shelf. Niuē: *fata*, a cage, a handbarrow, a shelf, a stage, (sometimes) the upper story of a house. Uvea: *fata*, a barrow, a bier. Fotuna: *fata*, a stage. Tahiti: *fata*, an altar, a scaffold, a piece of wood put up to hang baskets of food on; *afata*, a chest, a box, a coop, a raft, a scaffold; *paʻfata*, a cage, a box; *ahata*, a box; *ihata*, a box, a cage, a scaffold. Paumotu: *fata*, a heap; *afata*, a box, a chest. Maori: *whata*, a platform or raised storehouse for food, an altar, to elevate, to support. Moriori: *whata*, a raft. Marquesas: *fata*, *hata*, *hataá*, shelves. Rapanui: *hata*, a table. Hawaii: *haka*, a ladder, an artificial henroost; *alahaka*, a ladder. Mangaia: *ata*, a shelf; *atamoa*, a ladder; *atarau*, an altar. Mangareva: *avata*, a coffer, a box.

Viti: *vata*, a shelf; *tāvata*, a bier.

Aneityum: *ne-fata*, a press, a shelf; *noforofata*, a ladder, scaffolding.

Motu: *vatavata*, a ladder. Tanna: *nafatafata*, a stage. Bierian: *kovata*, id. Malo: *ivasa*, id.

Malagasy: *vata*, *vatra*, a box, a trunk, a coffer.

Hebrew: *ʿomed*, a platform, a place; *ʿemdah*, a lodging-place.

The Samoan *fata* is a pair of light timbers pointed at the ends and tied across the center posts of the house, one in front, the other behind the line of posts; rolls of mats and bales of sennit may be laid across these timbers; baskets of reserved victuals may be hung on the ends. The litter and the barrow are two light poles with small slats lashed across at intervals. The Marquesan *fata* is a stout stem of a sapling with the stumps of several branches, a hat tree in shape, though found among a barehead folk. These illustrations are sufficient to show what is the common element in all these

fata identifications, light cross-pieces spaced at intervals. With this for a primal signification it is easy to see how a ladder, a raft, a henroost, an altar come under the same stem for designation. Perhaps Samoan *fatafata* the breast obtains the name by reason of the ribs; it would be convincing were it not that the plumpness of most Samoans leaves the ribs a matter of anatomical inference.

In our three island areas the *fata* stem is unmistakable. Malo *ivasa* probably belongs with *fata*, for *tapu* (207) forbid Malo *sab* exhibits the *t-s* mutation in this speech and it is found in other Melanesian tongues. This form *ivasa* finds its parallel in Tahiti *ihata*. Bierian *kovata* and Efaté *kofeta* are the same *fata*-composite. Efaté *uētē* may be a derivative from *fata*, for *f-w* has a wide range and *a-e* mutation is so frequent as to call for no comment except that in all our homogenetics we have found both the *a*'s permanent. *Uētē* may produce *uērē* (on the *t-r* mutation see note 258). Having once accepted *uērē* we can accept *uēnr'*, strange as *nr* seems.

But the Semitic *md* can have no relation with a stem in *ft*.

294.

fatu, a stone.

Samoa: *fatu*, a stone, the stone of fruits, seed, heart, gizzard. Tonga: *fatu*, gizzard; *fatakala*, a black pebble-stone; *matafatu*, hard, not easily made to cry (stone-face). Tahiti: *faturei*, *fatuumuti*, stones in special uses. Fakaafo, Niuē, Futuna, Aniwa, Sika-yana, Vatē, Manahiki: *fatu*, a stone. Maori: *whatu*, a stone, the stone of fruits, the pupil of the eye, a testicle. Nuguria, Nukuoro: *hatu*, stone. Hawaii: *haku*, a hard lump of anything, the eyeball, adze-stones; *pohaku*, rock. Mangaia: *atu*, kernel of fruit; *koatu*, a stone. Mangareva: *atu*, a round fruit stone, any round form; *atumata*, pupil of the eye; *atutaha*, a stone used in turtle fishing. Fotuna: *tafatu*, stone.

Viti: *vatu*, a stone, a rock. Rotumā: *hof*, *-hoth*, *hathu*, id.

Nggela, Vaturanga, Sesake, Bierian, Mota, Arag: *vatu*, a stone.

Bierian: *votu*, id. Eromanga: *ni-vat*, id. Mota: *vat*, id.

Nguna: *fatu*, id. Fagani: *fa'u*, id. Lamassa: *fat*, id. Volow:

veat, id. Alo Teqel: *ve'e*, id. Nifilole: *ve*, id. Iai: *veto*, id.

Aneityum: *na-jetumanava*, *na-jotumanava*, the heart (cf. Samoa: *fatumanava*, id.). Duke of York: *wat*, *wātwāt*, id. Raluana:

wat, id. King: *wat*, id. Baravon: *watwat*, id. Solomon

Islands: *patu*, id. Moānus: *pat*, id. Aneityum: *ne-pat*, a whinstone. Brierly Island: *pak*, stone. Kalil: *'hat*, id.

Laur: *'hāt*, id. Pala, Lambell: *hāt*, id. Aneityum: *n-hat*, id.

Saa: *hau*, id. Ulawa: *hoihau*, id. Malekula: *var*, *ni-vit*, id.

Kabadi: *vakuna*, id. Kiriwina: *daku*, *gaku*, id. Tagula: *varu*,

id. Mekeo: *fau*, id. Hula, Keapara: *vau*, id. Galoma: *bau*, id.

Tubetube: *veku*, id. Sariba: *weku*, id. Mugula, Suau: *veu*, id.

Malay, Kayan, Silong, Macassar, Togeian Islands: *batu*, a stone.

Magindano: *watu*, id. Savu: *wawatu*, id. Ilocan, Sulu:

bato, id. Malagasy: *vato*, id. Satawal: *fahou*, id.

Hebrew: *eben*, stone. Ethiopic: *ēbān*, id.

In the Polynesian identification of *fatu* the variants all follow well-comprehended laws until we reach Rotumā *hof*, *hoth*, *hathu*. In the preceding Polynesian we have seen the *f-h* mutation; in the succeeding Melanesian we shall see yet more of it. The mutation *t-th* in *hathu* and *hoth* is found in the passage from Proto-Samoan to Viti, and yet other instances are found in Aneityum and Bugotu. The still further mutation *t-f*, found nowhere else in our present material, is common in Rotumā, as in these instances, *talinga* (350) ear Rotumā *faliang*, *fetū* star Rotumā *hefu*.

We shall examine our Melanesian material first in reference to the initial consonant.

fatu. Nguna, with elision of *t* in Fagani *fa'u*, abraded *fat* in Lamassa. *Fetu* and *footu* are found as composition members, the latter with Bierian *votu* and Rotumā *hoth* and *hof* being the only occurrence of that stem vowel.

vatu. Nggela, Vaturanga, Sesake, Bierian, Mota, Arag. Bierian *votu*, an alternative form, has just received comment. Abraded *vat* is found in Eromanga and Mota. The value of the evidence for the *t-r* mutation appears in note 258; if this be considered valid Malekula *var* belongs in this group. With vowel change we find in series Iai *veto*, Volow *veat*, Alo Teqel *ve'e*, Nifilole *ve*. With change to yet another vowel we have abraded Malekula *vit*.

hatu. Rotumā *hathu*. With elision of *t*, Saa and Ulawa *hau*. Abraded *hat* in Aneityum, Kalil, Laur, Lambell.

watu. Abraded *wat*, Duke of York, Raluana, King; duplicated *watwat*, Duke of York, Baravon.

These have been ascending variations. Descent in the series is found in:

patu. Solomon Islands (?). Abraded *pat*, Moanus, Aneityum and probably Brierly Island *pak*.

The Indonesian identifications, though few, are satisfactory.

It is impossible to find any resemblance, to say nothing of more intimate relation, in the Semitic proposed in identification.

fili, filā, bīla, bile, file, lightning. 295.

Samoa, Fakaafu, Futuna, Sikayana, Nuguria, Rarotonga: *uila*, lightning. Tonga, Niuē: *uhila*, id. Uvea: *uhila*, lightning; *hila*, to lighten. Hawaii: *uila*, *uwila*, *wila*, lightning. Tahiti, Mangaia, Nukuoro, Rapanui, Manahiki: *uira*, id. Maori: *uira*, lightning, to gleam, to flash. Moriori: *rauira*, lightning. Marquesas: *uia*, id.

Viti: *liva*, lightning.

Mota: *vila*, lightning. Omba: *vile*, id. Pala: *hīle*, id. Laur: *hille*, id. Malo: *uila*, id.

Kisa: *uila*, lightning. Pani: *kuilat*, id. Tagalog: *kuirlat*, id.

Java: *chalirit*, id. Tidore: *kila*, id.

Arabic: *barak*, *bara'*, to gleam, to flash, to lighten; *bark'*, the lightning.

Macdonald derives his lightning words from *bīlafila* (284) to shine. If these words be kin to Polynesian *uila* this derivation can not stand, for the Proto-Samoan stem of *bīlafila* has been shown to be **pulaf**, and of *uila* we have probably a stem **uhila**.

It is advisedly that I use the adverb probably. The true aspirate is so gentle a breathing that we have no very sufficient evidence for its existence in Proto-Samoan. From a careful examination of all the available material I have been led to the conclusion that Proto-Samoan possessed two aspirations, one so weak that it has failed of influence upon Samoan in its modern phase, but is retained in such other tongues of Nuclear Polynesia as employ the aspirate; the other, probably of a stouter intonation, which has passed into the sibilant in modern Samoan and remains an aspiration in Nuclear Polynesia.

The *uila* of Samoa (*uhila* in Tonga, Niuē, Uvea) involves the former or weak aspiration. The verb *hila* in Uvea goes far to prove that the aspirate is structural and no mere grace note of speech. The presence in Hawaii of the form *uwila* is another finger-board to the direct migration from Samoa to that group, and the verb *wila* is confirmatory of Uvea *hila*.

Viti *liva* is metathetic, closer to Melanesian consonantal forms than to the Polynesian initial vowel.

In Melanesia Malo has the modern Samoan form. Laur *hille*, Pala *hile* are akin to the verb form in Uvea. Mota, Omba and Efaté forms also derive from the verb.

Indonesian forms are in accord with the later Tongafiti *uila*, except perhaps Tidore *kila* in kinship with the verb *hila*, and in their own cycle of development they have undergone accretion by prefixes and suffixes which correspond to nothing in Polynesia.

Having segregated an effective stem *hila*, it needs but to put the Semitic by the side of it to show that kinship is out of the question.

296.

fōnu, turtle, tortoise.

Tonga: *fonu*, turtle, tortoise. Futuna, Niuē, Uvea, Fotuna: *fonu*, turtle. Tahiti, Hawaii, Mangareva, Rapanui, Tongarewa: *honu*, id. Marquesas: *honu*, id. Samoa: *volu*, tortoise. Nukuoro: *holu*, turtle.

Viti: *vonu*, turtle.

Nggela: *vonu*, turtle. Sesake: *fonu*, id. New Ireland (Duffield): *kauk-foon*, id. (*kauk*, fish). Kalil, Laur: *hūn*, id. Lamassa, Lambell: *pūn*, id. King: *pūni*, id.

Malay: *pāñu*, turtle. Malagasy: *fani*, id.

Arabic: *'āwinat*, *'ayinat*, turtle, tortoise.

Two matters engage our attention at the outset of the examination of this material. Nukuoro and Samoa are the only languages which present the *n-l* mutation, a mutation of wide extent in Polynesia and of considerable frequency in the Melanesian area, as the table will exhibit. This is but one of many evidences which go to show that Samoa in its modern phase and Nukuoro form a binary system in the general sphere of Polynesian affinities.

The other point is that while the variation in Melanesia is generally upward, we find the downward mutation in Lamassa, Lambell, and King, and the extreme of upward mutation in Kalil and Laur; yet these five languages are comprehended within 61 miles of New Ireland littoral. Thus we see that, considered by itself, the direction of mutation lacks diagnostic value.

The Indonesian identifications are satisfactory.

In the Arabic offering there is far too much, and of what does exhibit some resemblance, 'ā-win-at, the alternative form sacrifices a half. Further, the change is not in series, which we have come to regard as essential in our speech family, but in *w-y*, a two-column leap from labial proximity to palatal proximity. No matter were the superficial resemblance even greater, we could not accept an identification which so far violates the instinct of Polynesian phonetics.

297.

ngil i, kil i, kili, to dig.

Tonga: *keli*, to dig, to sink, a dyke, a trench, a ditch; *fekeli*, to paddle quickly. Niuē, Uvea: *keli*, to dig. Samoa: 'eli, to dig, to pull hard in paddling. Hawaii: *eli*, to dig in the ground. Maori: *keri*, to dig, to rush along violently. Manga-reva, Nuguria, Rapanui, Paumotu: *keri*, to dig. Marquesas: *kei*, id. Nukuoro: *keni*, id. Tahiti: *eri*, to undermine; *heri*, to dig a hole, as a rat or a crab; *ari*, to scoop out the earth with both hands.

Viti: *keli*, a ditch; *kelia*, to dig a hole.

Santo: *keli*, to dig. Kiriwina: *kelikeli*, id. Sariba: *keri*, id. Malo: *cele*, id. Nggela: *geli*, id. Motu: *gei*, id. Solomon Islands: *eli*, id. Makura: *nggili*, id. New Britain: *kir*, *kire*, id. Baki, Bierian: *mkili*, id. Mota: *gil*, id. Malekula: *kiri*, id. Keapara: *gia*, id. Misima: *giar*, id. Ambrym: *gali*, id. Kwagila: *karo*, id. Taupota: *garai*, id. Wedau, Galavi: *g'arai*, id. Awalama: *haraia*, id. Tavara: *halaia*, id. Dobu, Kiviri, Oiun: *sara*, id.

Malay: *gali*, to dig. Malagasy: *hadi*, id.

Arabic: *kara'*, *karw'*, to dig.

In the Polynesian section Nukuoro *keni* (*l-n* mutation) is a common variation.

In the broader aspect the variants in the three island areas are the usual changes of *k* and *l*. The former vowel is somewhat critical; in Polynesia and Viti it is *e* throughout, in Indonesia (one sound identification, one debatable) it is *a*; in Melanesia the characteristic form is in *i*. Variants from the Melanesian *kili* stem are: in the Polynesian direction Nggela, Santo, Malo and the Solomon Islands (?); in the Indonesian direction Ambrym, Efaté, and several New Guinea languages.

It would be better if we had transition forms to assist in the Malagasy identification, but its changes are in line with Polynesian phonetics and are no bar to acceptance of the form.

The Semitic here is at least to be accepted as a resemblance, for in the **klh** trilateron the final consonant might readily pass from a Polynesian language, yet it must be said that it would more probably be retained as *s*. There is no evidence to show that the Proto-Samoan stem was ever other than *keli*, that is the root *kel* with the suffix of the verb-formative *i*. Even when reduced to *kel* the Semitic resemblance is not abolished.

Item 303 should be included with this.

ngore, usu, ngusu, the nostrils, nose.

Samoa: *isu*, nose, snout, bill. Futuna, Fakaafu, Aniwa, Manahiki: *isu*, the nose. Nuguria: *kaisu*, id. Fotuna: *eisu*, id. Moiki: *ishu*, id. Tonga, Niuē, Uvea, Maori, Tahiti, Hawaii, Marquesas, Mangareva, Paumotu, Rapanui, Tongarewa, Nukuoro: *ihu*, id. Rarotonga: *putaiu*, id. Vaté: *tus*, id.

Viti: *uthu*, nose. Rotumā: *isu*, id.

Vaturanga, Suau, Sariba, Tubetube: *isu*, the nose. Mugula: *is'u*, id. Roro: *izu*, id. Nggela, Bugotu: *ihu*, id. Sesake, Epi: *ngisu*, id. Bierian: *kinihu*, id. Baki: *sunu*, id. Brumer Island: *ishuda*, id. Maewo: *lisui*, id. Wango: *barisu*, id. Roro, Kabadi: *itu*, id. Pokau: *idu*, id. Sinaugoro, Keapara: *ilu*, id. Hula, Galoma, Rubi: *iru*, id. Raqa, Oiun: *iu*, id. Awalama, Taupota, Mukawa: *niu*, id. Nggao: *nehu*, id. Buka: *wesu*, *uies*, *osu*, id. Ulawa, Bululaha: *palusu*, id. Saa: *pwalusu*, id. Fagani: *barusu*, id. Ambrym: *guhu*, id. Motu: *udu*, id. Aneityum: *in-gidjin*, id.

Gani: *usnut*, the nose. Malay: *idung*, id. Java: *irung*, id. Togeian Islands: *ingu*, id. Malagasy: *uruna*, id.

Hebrew: *nhīraim*, the nostrils. Syriac: *nhīro'*, the nose. Arabic: *noh'rat*, the aperture of the nose.

In the Efaté the form *ngore* is not to be found in Polynesia nor is it conspicuous in our Melanesian material. It may be that it reappears in Alite *ngongora* and Duke of York *gigiro*.

The other words, *usu* and *ngusu*, serve as transition forms, *usu* pointing to *isu* the nose in Polynesia and *ngusu* to *ngutu* the mouth, which is very near, nearer yet when we bear in mind that *ngutu* the mouth is snout as well and that *isu* the nose is snout too. We shall examine our material first for the discrimination of the *isu* homogenetics.

The Polynesian languages have *isu* firmly differentiated and this form goes over into Rotumā. In the foregoing list Vaté *tus* rests on Turner's collation of two languages from Efaté, Meli and Erakor, differing widely from the unnamed language which Macdonald records, and not distinguished by name in Turner's work.

In Melanesia *isu* is found unmistakably in Vaturanga, Nggela, Bugotu, Brumer Island, and probably Buka (*wesu*, *uies*). In Indonesia it is possible that the Togeian Island preserves it; the Malay and Javanese are remote and beyond proof.

Next we shall correlate the *usu* forms, restricting these to such as have *u* for the former vowel and are devoid of a consonantal modulant. This is found in Efaté, Viti, Buka (*osu*), and Motu *udu*. It is recalled by Gani *usnut*, and perhaps by Malagasy.

Efaté identifies for us *usu* and *ngusu*. The latter is not common, Ambrym *guhu* is the only affiliated form. More common is the *ng*-modulant upon the *isu* stem: Sesake, Epi, *ngisu*; Bierian, *ki-nihu*; Nggao, *nehu*; Baki, *sunu* (metathetic).

We now encounter another group of forms, the *l*-modulant upon the *isu* and the *usu* stem. Simply it is *lisui* in Maewo. Beyond this point it does

not appear independently, but only in composition with another element, *ba-pa-pwa*: Wango, *barisu*; Fagani, *barusu*; Ulawa, Bululaha, *palusu*; Saa, *pwalusu*. The value of this prefatory member is at present unknown. As regards the *lisu-lusu* member of the composite we are by no means certain. We may choose to regard it as a mutant form of *ngusu*, but it should be noted that neither in Polynesia nor in Melanesia have we confirmatory evidence of *ng-l* mutation.

We have already seen the interchangeability of *isu* and *usu*. The Melanesian material shows also the interchangeability of *ngisu* and *ngusu*, *lisu* and *lusu*. As to the former of these pairs Efáté shows that *usu* and *ngusu* are not only broadly interchangeable, but that they may exist as alternates in the same language. Now *ngusu* of Efáté is clearly Polynesian *ngutu*. Accordingly we are now to pass the homogenetics of that stem under review, not stopping to distinguish in sense between mouth, snout, lips, beak, bill, all of which are found:

Samoa, Tonga, Futuna, Uvea, Niuē, Fakaafu, Moiki, Maori, Rarotonga, Mangareva, Rapanui, Paumotu: *ngutu*. Hawaii: *nuku*. Tahiti: *utu*. Fotuna: *rangutu*. Marquesas: *kiikutu*, *kiinutu*. Aniwa: *tangutu*. Nuguria: *launutu*, *launuhi*.

Viti: *ngusu*. Rotumā: *nuchu*.

Mota Maligo: *ngusi*. Mota Veverau, Merlav: *ngusui*. Gog: *ngus*, *ngusun*. New Georgia: *ngusu*. Baki: *sunu*. Guadalcanar: *ngisu*. Pokau: *nutu*. Motu: *udu*.

Saparua: *nuku*.

In this latter collation it will be seen that the Polynesian is altogether of the *ngutu* type, the Melanesian of the *ngusu* type, except that Motu with the very same which reappears in Tahiti serves as the transition phase.

We may lay out this material in a degenerative series, *ngutu-ngusu-usu-isu*. Yet it seems to me far more consonant with that we now know of the spirit of Polynesian to present them in the other as monuments of progress from a broadly diffuse primitive *su* root in the direction of higher specialization in use by modulant coefficients, *u*, *i*, *ngu*, *ngi* and *li*. In that view of the case we need recognize no difficulty in the fact that *lisu* does not readily derive from *ngisu*, *lusu* from *ngusu*; they do not have to, they stand on their same plane of specialized evolution and they stand independent.

And with this primal root *su* the Semitic presents not the slightest resemblance.

299.

ngum i, um i, ngu i, ngw i, mw i, to seize, to grasp, to catch, to hold (with or in the hand).

Tonga: *kuku*, to clench the fist, to hold fast in the hand; *kukukuku*, to hold and carry in the hand. Futuna: *kukumi*, *kuku*, to clasp in the hand. Niuē: *kūkū*, to hold fast, to grasp. Uvea: *kumi*, to grasp after; *kukumi*, to throttle; *nima kuku*, the fist. Mangareva: *kukumū*, to close the fist. Samoa: 'u'u, to take hold of, to grasp, to clutch. Fotuna: *no-kumia*, to grasp.

Viti: *kukuva*, to hold a thing fast; *nggunggu*, clinched; *nggumi*, to clench; *nggunggutha*, to hold in the hand.

Motu: *guguba*, to hold tightly, to squeeze with tight fingers.

Malay: *gângam*, to clutch, to clench, the clenched hand, the fist.

Java: *gâgâm*, id.

Arabic: *kaṃḳama*, to collect, to seize or catch with the hand, to take.

The Proto-Samoan stem is **kum**. This is apparent in Efaté *ngum* and *um*.

It is purely a Nuclear Polynesian stem except for the extreme eastward extension to Mangareva. That it is identified only in Motu, Efaté, Viti, and Nuclear Polynesia shows it to have been brought by the migration stream through the south gate and along the Viti stream; and its sole Malay identifications lie along the channel which that stream must have followed before leaving Indonesia.

Our Viti forms are of particular interest. They reduce to stems *kum*, *kuv*, and *kuh*. Of these the first is the stem common to Nuclear Polynesia, Efaté, and Indonesia; the second accords with Motu, far back in the Torres Straits fairway; the third nowhere else appears. The sense is so close for all three as to show their unity in essentials. This is exceptional, but it falls readily into accord with the hypothesis of seed as well as root in this primordial language family.

In brief, this is that out of a seed of speech roots become such by the addition of consonantal modulants to differentiate specific particular manifestations of the primordial act or state. I have worked out the value of a number of these consonants when prefixed as coefficients. *Ex hypothesi* we should look for a similar range of differentiations with consonants suffixed.

In this instance we have *ku* as a root thus developed. Its primal sense is clearly something to do with the hand and its elemental activity. What then is the elemental activity of the human hand? Our ergographs might not register it at a milligramme, but the curling baby fingers are in the position of grasping, the instinct to clutch which Dr. Louis Robinson has said embodies whole ages of comprehension of the first need of arboreal life. In its primal sense *ku* is the expression of the primordial clutch of this race of primitive speech inventors. Such variety as succeeding consonants may affix to the primordial clutch may express the manner or the degree of such grasping.

In our three Viti stems we find a certain order of degree; just to hold in clutching hand, *kuh*; to clench the hand, *kum*; to clench and hold fast, *kuv*. In even degree *h* is one of the weakest of consonants, merely a breath; *m* is so little removed from the vowels that it is among the very first of the consonant acquisitions; *v* is one of the latest acquisitions, a strong sound for men who have long since learned to speak and to speak strong as becomes men.

300.

ika, a fish.

Fakaafu, Tonga, Futuna, Niuē, Uvea, Moiki, Nuguria, Sikayana, Vaté, Maori, Marquesas, Mangareva, Mangaia, Paumotu, Tongarewa, Rarotonga, Manahiki: *ika*, fish. Aniwa, Fotuna: *eika*, id. Samoa: *i'a*, id. Nukuoro, Tahiti, Hawaii: *ia*, id. Rapanui: *ika*, fish, animal.

- Viti: *ika*, fish. Rotumā: *i'a*, id.
 Epi: *yika*, fish. Sesake, Ambrym, Santo, Southeast Epi: *ika*, id.
 Bieran: *ne-ika*, id. Mota, Lo, Fagani, Belaga, Nggela: *iga*, id.
 Arag, Omba: *ige*, id. Wango, Bululaha: *i'a*, id. Ugi, Ulawa,
 Alite: *ia*, id. Roro: *maia*, id. Norbarbar: *ie*, id. Nengone:
wa ie, id. Saa, Tubetube: *ie*, id. New Georgia: *ihana*, id.
 Dobu, Tavara, Awalama, Taupota, Wedau, Boniki, Mukawa,
 Kubiri: *iana*, id. Kabadi: *veana*, id. Duke of York: *ian*, id.
 Kiviri: *iun*, id. Kiriwina: *iena*, id. Murua: *iini*, id. Matupit:
ien, id. Baravon: *en*, id. Buka: *eina*, *aenna*, *aienne*, *aiena*, id.
 Merlav, Pak: *ig*, id. Motlav, Gog, Mosin, Alo Teqel, Volow:
eg, id. Malekula: *na-ih*, id. New Ireland (Duffield): *kauk*, id.
 North Borneo: *jikan*, fish. Malay, Massaratty, Teor, Ilocan,
 Mayapo, Gah: *ikan*, id. Bouton: *ikani*, id. Amblaw: *ikiani*, id.
 Menado: *maranigan*, id. Silong: *ackan*, id. Sulu: *isda*, id.
 Kar Nicobar: *ka*, id. Central Nicobar: *ga*, id. Lariko,
 Wahai, Gani, Saparua, Ahtiago, Matabello: *ian*, id. Liang,
 Morella: *ian*, id. Tidore: *nyan*, id. Batumerah, Awaiya,
 Caimarian: *iani*, id. Mysot: *ein*, id. Java: *iwa*, id. Teluti:
yano, id.
 Hebrew: *dag*, *dēgē*, *dagah*, *degath*, fish.

In the data here assembled we have two working stems, which, from the regions of their greatest frequency, are to be described as *ika* the Polynesian stem, and *ikan* the Indonesian stem.

We find *ika* as the stem in all but five of the Polynesian languages; and the only change affects the consonant; in Samoa and Rotumā it has so lately vanished that enunciation still marks the gap; in Nukuoro, Tahiti, and Hawaii it has been forgotten that a consonant ever intervened.

This stem is of the most common occurrence in Melanesia. In various stages of dilapidation we may trace it from Nengone in the far south to the central Solomons and with possibly one sporadic instance farther north in the eastern gateway. Epi shows in *yika* the *ika* stem with a slight semi-vowel reinforcement, possibly repeated in North Borneo *jikan*, though the value of this *j* is not distinctly set forth. The normal *ika* is found in the New Hebrides, and with a variant not possible in Polynesia, as *iga* and *ige* in the New Hebrides and the central Solomons. The change of the final vowel from *a* to *e* is so slight as not to call for detailed consideration. Wango and Bululaha reproduce Samoa and Rotumā *i'a*. *Ia* is found in a part of the Solomons, but not restrictively, for *ie* carries it along to Norbarbar and Nengone. We are last to consider a variant which would be impracticable in Polynesia, terminal abrasion to a closed stem, *ig* and *eg* in the Banks Group, *ih* in Malekula, perhaps in the New Ireland composite *ka-uk*.

Modifications of the *ikan* stem are found in the northern part of Melanesia, the southernmost occurrence as well as the least altered being New Georgia *ihana*. The presence of the *n* serves to identify *ikan* for us, despite the dropped *k*, in Duke of York, Matupit, Buka and Baravon. These are all within the range of Post-Polynesian Malayan voyaging, recourse to which explanation has been had in *folau* (287).

Regarding the suffixed *n* as characteristic of Indonesia and affixed upon Polynesian loan material in accordance with an idiosyncrasy foreign to the source of the loan, we may dispose of many of these forms by a list which exhibits their progress in variation from the standard type: *jikan*, *ikan*, *ikani*, *ikiani*, *maran-igan*, *ackan*, *iani*, *yano*, *nyan*, *iyen*, *ian*, *ein*. Sulu *isda* is impossible of coordination. Nicobar *ka* and *ga* would need proof that *ika* could sacrifice that former syllable which only in Silong *ackan* has admitted of any alteration whatever. Java *iwa* is last to be noted; it should not be understood as involving a *k-w* mutation, but rather does it represent something very much like Samoa *i'a*, and the semivowel *w* is but the attempt to hold the two vowels apart, as is accomplished in Samoa by the *ʻ*. This is a particularly interesting identification, for it is the only language in Indonesia which has not added *n* to the Proto-Samoan stem.

Concerning the Semitic Dr. Macdonald writes: "It is possible that *ika* is the same by the elision of the *d*." Equally is it possible that darksome is irksome "by the elision of the *d*." A simple philology.

"*I'a* is the general name for fishes," Pratt notes in his Samoan dictionary, "except the bonito and shellfish (mollusca and crustacea)." We may forgive the inaccuracy of the biology in our gratitude for the former note. The bonito is not a fish, the bonito is a gentleman, and not for worlds would Samoa offend against his state. The Samoan in his *ʻuʻpu ja'aaloalo* has his own Basakrama, the language of courtesy to be used to them of high degree, to chiefs and bonitos.

One does not say that he goes to the towns which are favorably situated for the bonito fishery; he says rather that (*juna'i*) he goes into seclusion, he withdraws himself. He finds that the fleet which is to chase the bonito has an honorable name for this use, that the chief fisher has a name that he never uses ashore. He will not in so many words say that he is going to fish for bonito, he says that he is going out paddling in the courtesy language (*alo*); he even avoids all chance of offending this gentleman of his seas by saying, instead of the blunt vulgarity of the word fishing, rather that he is headed in some other direction (*ja'asanga'ese*). He does not paddle with the common word but with that (*pale*) which he uses in compliment to his chief's canoe. He will not so much as speak the word which means canoe; he calls it by another word (*tafānga*), which may mean the turning away to one side. In this unmentioned canoe he may not carry water by its common name, he must call it (*mālū*) the cool stuff. He will not mention his eyes in the canoe; he calls his visor (*taulauifi*) the shield for his chestnut leaves. Even the word for large becomes something else (*sumalie*) in this great game. The hook must be tied with ritual care; it is called (*pa*) out of the common name for hook; no bonito will take a hook which has not been properly tied; the fastening is veiled under the name (*janua*) for the land. There are many rules to observe; their disregard is called (*sopoliu*) the stepping over the bilges, from the most unfortunate thing that the fisher can do. He may hail the bonito by his name (*atu*), or he may call him affectionately or coaxingly (*pa'umasunu*) old singed-skin. If he has the fortune to hook his bonito he must raise the shout of triumph, *Tu! Tu! Tu e!*, not his whole name but one of its syllables; he triumphs as over a foe honorably slain in combat, but he avoids hurting the feelings

of the other gentlemen of the sea. The first bonito caught in a new canoe he calls (*ola*) life; the first bonito caught in any season bears a special name (*ngatongiā*), of uncertain signification, and he presents it to his chief. His catch he reckons by a special notation; to his numerals he adds the word (*tino*) body; he counts them as one-body, two-body, three-body. Parts of the gentleman have specific names of their own; his fins (*asa*) and his entrails (*fe'afe'a*) are called in terms nowhere else employed; the tidbit of the belly part, which the fisher must give to his chief, is called (*ma'alo*) by the honorific title of the chief's abdomen. And if the rites were not duly observed, if the hook was not rightly tied, if the fisher was so incautious as to mention his eyes, if one of a hundred faults was committed and the fishing was in vain, then the fisher acknowledged his ill success abjectly by saying that (*maloā*) he was conquered.

Such is the language Samoans use to the gentleman of the seas, and he is not *i'a*.

301.

kasu, kas, kau, tree, wood.

Samoa: *la'au*, a tree, a plant, wood, timber; '*au'auli*, '*auali'i*, names of trees. Futuna: *laākau*, a tree, plant, wood; *kauasi*, sandal-wood. Niue: *lakau*, a shrub, a tree, wood; *akau*, a tree, wood, timber; *kauhuhu*, the name of a shrub. Fakaafo, Manahiki: *lakau*, a tree. Nuguria: *lakau*, *rakau*, id. Hawaii: *laau*, a tree, wood, timber. Maori: *rakau*, id; *kauere*, *kauka*, *kauri*, names of trees. Rarotonga, Tongarewa, Fotuna, Mangareva: *rakau*, a tree. Paumotu: *rakau*, a tree, a plant. Sikayana: *rakau*, wood. Nukuoro: *rakau*, a tree; *ururakau*, medicine; *haiururakau*, a doctor. Rapanui: *rakau*, medicine. Vaté: *rakau*, a tree, a club. Tahiti: *raau*, a tree, wood, timber. Aniwa: *foirakou*, a tree; *rakao*, a club. Tonga, Uvea, Marquesas: *akau*, a tree, wood, timber. Moiki: *ngakau*, tree.

Viti: *kau*, *kai*, a tree, wood. Rotumā: *oi*, a tree.

Nggao: *gazu*, a tree. Sesake, Epi: *kau*, id. Marina: *gau*, id. Nguna: *nakau*, id. Motu: *au*, a tree, firewood. Aneityum: *nelcau-un*, a rafter; *cai*, a tree. Solomon Islands: *au*, a tree. Omba, Arag, Nggela, Bugotu: *gai*, id. Murray Island: *gair*, id. Maewo: *geiga*, id. Tangoan Santo: *tagai*, id. Mota: *tangae*, id. Gog: *regai*, id. Lakon: *rega*, id. Lo: *raga*, id. Bierian: *lakai*, tree; *leke*, wood. Malo: *wu-cai*, tree. Tanna: *ni-gi*, id. Epi: *lakai*, *yesi*, id. Merlav: *tankei*, id. Volow, Motlav, Norbarbar: *tenge*, id. Vuras: *retenge*, id. Mosin: *rekenge*, id. Pak, Sasar, Alo Teqel: *enge*, id. Malekula: *ni-ge*, *n-ai*, id. Ulawa, Bululaha, Alite: *ai*, id. Vaturanga, New Georgia: *hai*, id. Duke of York: *diwai*, id.

Malay, Baju: *kayu*, tree, wood. Teor: *kai*, id. Malagasy: *hazu*, id.

Hebrew: '*eš*, tree, wood; from Hebrew, '*ašah*, Arabic, '*aša*', to be hard, firm.

The stem *kau* does not appear independently in any language of Polynesia proper. For tree and for timber we have the composite *lakau* in various stages of transformation. But *kau* will also be found as an initial

component of various tree names. It is in Viti first that we find it in free existence. In Melanesia this form is rare. It occurs as *kau* in Efaté, Sesake, Epi, Nguna, and perhaps may be preserved in Aneityum; as *gau* in Marina; as *au* in Motu and somewhere in the Solomon Islands.

The triplicity of the Efaté forms suggests a possible transition. *Kasu* and *kas* are easy to be correlated, *kasu* and *kau* less easy. They might be linked by the assumption of a parent form *kahu*, from which each might derive. This would appear in modern Samoan as *kau*; but I have found it the rule that even the mildest aspirate in Proto-Samoan becoming extinct in modern Samoan is yet retained as aspiration in Nuclear Polynesia and as *th* in Viti, none of which mutations is found on this record.

With the statement of this contrary argument, let us adopt this as a working hypothesis. With *kasu* we identify Nggao *gazu* and Malagasy *hazu*. With a parent *kahu* we may associate Malay and Baju *kayu*. This is as far as this unsupported hypothesis will carry us, although *kayu* invites enticingly as a bridge to *kau*.

We next employ the comparison of Polynesian *lakau* and Bierian *lakai* to give us a transformation phase by which we may cross from *kau* to *kai*, and in Viti we find *kai* occurring as a dialectic variant of *kau*. This secondary stem *kai* (as *kai*, *cai*, *gai*, *gae*) is discoverable in the free state or in composition over a wide Melanesian range, and in Teor in Indonesia. In Vaturanga and New Georgia *hai* we find the transition to Malekula *n-ai* and to *ai* of Ulawa, Bululaha, and Alite, probably including Duke of York *diwai* as a composite.

For the next deterioration phase we have the benefit of a similar transition member. As we were able to link *lakau* and *lakai*, so may we link *lakai* and Lo *raga*, Lakon *rega*, and Bierian *leke*. Thus we obtain a tertiary stem *ka*, *ke*. The *ka* (*ga*) form occurs only in Lakon and Lo. The *ke* (*ge*) form we list from Norbarbar, Vuras, Mosin, Pak, Sasar, Alo Teqel, Malekula; and the *gi* from Tanna.

Let us not neglect to observe that in many of these Melanesian languages *kau* is able to stand free, as in Viti and Efaté; omitting the combined article *n* variously vocalized, we list free forms in Nggao, Sesake, Epi, Marina, Nguna, Motu, Aneityum, Solomon Islands, Omba, Arag, Nggela, Bugotu, Murray Island, Tanna, Malekula, Ulawa, Bululaha, Alite, Vaturanga, and New Georgia.

In the Polynesian area we have noted that the prior composition element is *la*, variously modified to *ra*, *nga*, *a*. We find this recurring in Melanesia. First as *la*: Aneityum, *ne-lau-un*. Then as *e*, corresponding to *a* in Tonga, etc.; Pak, Sasar, Alo Teqel, further establishing a variant stem *nge* out of the tertiary *ge*. We now pass from *la* to *ta*, a mutation ill supported; it may be better to regard it as an independent member of the composite. As *ta* we note its occurrence in Tangoan Santo, Mota, Merlav; as *te*, in Volow, Motlav, Norbarbar. It may even be *di* in Duke of York *diwai*. The form *tenge* illuminates Vuras *retenge* as a double composite, the common *la* stem prosthetic upon the *te-nge* compound; and upon *retenge* hangs Mosin *rekenge*. The prior element in Malo *wu-cai* is not elsewhere found. Maewo *geiga* eludes analysis, except upon the scheme that it is a duplicate of slightly variant *kai* derivatives.

This is all very intricate, but the proof needs just this link by link elaboration. The only point as to which we may retain proper doubt is as to the *kasu* group of forms; they are certainly an anomaly. Yet it is just upon the *kasu* group, this irreconcilable *kasu*, that the whole of the proposed Semitic origin rests.

302.

kat i, katikati, ngat i, to bite; **kakat**, a bite; **fikit**, to bite each other.

Futuna: *katikati*, to gnaw off the bark of sugar cane with the teeth; *kakati*, to corrode, to pierce, to eat in. Niuē: *kakati*, to bite, to chew. Maori: *kakati*, to eat into, to gnaw through, to corrode; *katikati*, to nibble. Rarotonga: *kati, kakati*, to bite. Paumotu: *kakati*, id. Nukuoro: *kati*, id. Rapanui: *katikati*, to scratch. Samoa: *'ati*, to eat in, to corrode; *'a'ati*, to eat in, to corrode, to gnaw off, to pierce (as the teeth of a dog); *'atimotu*, to bite through. Tahiti: *ati*, to bite; *aati*, to bite, to gnaw, to tear with the teeth. Hawaii: *aki, aaki, akiaki*, to bite, to nibble.

Viti: *katia*, to bite.

Malo: *cate*, to bite. Tangoan Santo: *kati*, id. Makura: *nggati*, id. Bierian: *mkati*, id. Santo: *kotkot*, id. Malekula: *haji*, id. Mota: *ngit*, id.; *gat*, to chew. Tagula: *gadu*, to bite. Nada: *gad*, id. Kiriwina: *gadi*, id. Tubetube: *letai*, id. Suau: *retai*, id. Murua: *gedi*, id. Kubiri: *gitaboni*, id. Dobu: *go'i*, id. Boniki: *kutai*, id. Mukawa: *kutakibai*, id. Taupota, Wedau: *utai*, id.

Malay: *gigit*, to bite; *gigitan*, a bite. Malagasy: *hehitra*, to hold, to grasp, to seize, clutch, bite; *kaikitra*, a bite; *manaikitra*, to bite.

Syriac: *nkat*, to bite.

At the time of the earliest, the Proto-Samoan, migration the effective stem was *kati*, this, however, being formed upon the root **kat** by the verb-formative *i*. The bare root must have been carried down into Melanesia by the Proto-Samoans, for it is found preserved in Santo and Mota. Furthermore, in these two languages reproducing the archaic form we find the only deviations from the radical *a*. One of these, represented by the Mota *ngit*, is the vowel of the Malay identifications.

The Syriac stands as a resemblance, form and sense.

303.

kil i, kili, to dig; **kāli**, a digging stick; **kīli**, a current (as in the sand; lit. that which digs). Cf. **ngil i** (297) to which this note is supplemental.

Ethiopic: *karaya*, to dig. Arabic: *kara'*, id. Hebrew: *karah*, id. Chaldee: *kerā'*, id.

304.

kirikiri, gravel, pebbles.

Tonga: *kilikili*, small stones placed on graves. Futuna, Niuē: *kilikili*, gravel. Samoa: *'ili'ili*, gravel, pebbles, small stones; *'iliti*, to be pained by walking over sharp stones; *ta'ili*, stony,

gravelly. Maori: *kirikiri*, gravel. Mangaia: *kirikiri*, flints, small stones. Moriori: *kiripohatu*, gravel. Rapanui: *kirikiri*, polished stone. Mangareva: *kirikiri*, flints, small stones. Paumotu: *kirikiri*, stony, pebbly, gravelly; *huakiri*, gravel, stony. Sikayana: *kirikiri*, shingle. Tahiti: *iriiri*, gravel. Hawaii: *ili, ilili*, small stones worn smooth by water. Nukuoro: *kerikeri*, pebbles. Marquesas: *kiikii*, gravel.

Viti: *kilitha*, to turn up stones, to turn a thing up and look under it. Solomon Islands: *kilifela*, flint; *pokiri*, a fishing sinker. Motu: *miri*, gravel.

Malay: *krikil, kârikil, karikil*, gravel, pebbles; *batu-kelikir*, gravel.

Arabic: *girgir'*, a berry; *garal'*, gravel. Hebrew: *garger*, a berry.

The Proto-Samoan stem is *kilit*.

To the significations assigned in the Polynesian section should be added that of fragments of broken coral such as are used for flooring houses where shingle of volcanic rock is not available. I am very doubtful of the mineralogy which assigns flint to Mangaia, Mangareva and the Solomon Islands.

The Viti *langgere* gravel may perhaps be a composite of this stem. While *kilitha* very clearly reproduces the *kilit* stem its signification is far from satisfactory.

So far as we are in a position to judge Motu *miri* amounts to no more than a partial resemblance, for in all this material we have no evidence confirmatory of a *k-m* mutation, and Motu in four instances disposes of *k* thus: twice by extinction (301, 306), once preserves it (249), once alters it to *g* (299).

The Malay forms are coordinate with the modern abraded form of the stem.

The Semitic has a general resemblance, but it has the stem *grh*, of which the last member throws it out of accord with the Polynesian skeleton *klt*.

305.

kuli na, uili na, the skin, the bark.

Tonga, Futuna, Niuë, Uvea: *kili*, the skin, bark, husk. Nukuoro: *kili, kiri*, the skin. Fotuna, Maori, Mangaia, Mangareva: *kiri*, skin. Paumotu: *kiri*, the bark. Rapanui: *kiri, iri*, the skin. Marquesas: *kii*, skin, hide, leather. Samoa: *'iliola*, the outer skin; *'iliasina*, light-colored, as the skin; *fa'a'ililua*, to injure down to the second skin by scratching. Tahiti: *iri*, skin, hide, bark. Hawaii: *ili*, the skin, the bark.

Viti: *kuli*, skin. Rotumā: *uli*, id.

Ambrym: *ili*, skin, bark. Sesake: *weli*, id. Moanus: *kulit*, id. Lo: *gilit*, id. Epi: *kulu*, id. Murray Island: *egur*, id. Nggao: *guli*, id. Bugotu, Nggela: *guiguili*, id. New Georgia: *korekore*, id. Savo: *korakora*, id. Vaturanga: *kokora*, id. Wango: *uriuri*, id. Malo: *uri*, id. Baki: *kulukuti*, id. Bierian: *kul*, id. Eromanga: *no-kohitan*, id. Santo: *kurina*, id. Malay: *kulit*, skin, hide, leather, bark, rind, husk, shell. Baju: *kulit*, skin, bark. Matu: *kulit*, id. Ahtiago: *ikulit*, id. Bouton: *okulit*, id. Teor: *holit*, id. Madura: *koli*, id. Savu: *kori*, bark. Arabic: *gilib*, skin, bark.

The Polynesian word varies but slightly, and that normally, from *kili*. As it is in use solely with the value of a noun and hence needs no formative affixes which might protect a radical terminal consonant as in verb-derivatives, we have no means of proving a *kilit* stem. Indonesia exhibits a stem which differs in the former vowel and preserves a final consonant, *kulit*. Melanesia sometimes approaches the Polynesian, other times the Indonesian.

Of the Polynesian type we note Ambrym and Sesake, both of which have abraded the initial *k*, and in neither is it usual to drop that letter. Lo preserves the vowel in *gilit* and at the same time has the Indonesian *t*-final. Codrington (Melanesian Languages 90, note) suggests as a possibility that Mota *wil* to peel is homogenetic; in his Mota dictionary, however, he defines with great precision "to turn round horizontally, to peel, turning the fruit over in peeling," this in sense and in form bringing the word into close association with *vili* to turn round; the *k-w* mutation in Mota is suggested but once, *kutu* (306) a louse Mota *wut*.

The two forms in Efaté are not wholly satisfactory as transition phases, for they would involve the unsupported *k-w* mutation. Still we do find *kuli*, a frequent Melanesian and altogether Indonesian form, alternative with *uili*, which seems to offer some possibility of a connection with the Polynesian *kili*.

The *kuli* form without consonant termination is found in Viti, Rotumā, Epi (Bierian and possibly Baki), Murray Island, Nggao, Bugotu, Nggela, New Georgia, Savo, Vaturanga, Wango, Malo, and Santo. There is a considerable variation in these forms, but they are to be connected with this stem. In Baki *kulukuti* we may have a composite of which *kulu* alone pertains to this group. In Moānus we have a distinctly Indonesian form; geographically it is within the feasible limit of Post-Polynesian Malayan intercourse; yet Lo, almost too far south for this explanation to be considered valid, has the *t*-final in *gilit*; and Eromanga *no-kohit-an* is suggestive, although we have no other instance in that language of *l-h* mutation.

All the Indonesian identifications are of the *kulit* type, except that Madura and Savu have either lost or have not acquired the *t*-final.

The Arabic shows resemblance to the Indonesian type as to consonants, to the Polynesian as to vowels.

306.

kutu, the louse.

Tonga, Futuna, Uvea, Fotuna, Marquesas, Mangareva, Rarotonga, Rapanui, Nukuoro: *kutu*, the louse. Niuē: *kutu*, the louse, the flea. Maori: *kutu*, the louse, human vermin in general. Samoa: 'utu, the louse; 'utufiti, the flea. Paumotu: *gutu*, the louse. Tahiti: *utu*, id. Hawaii: *uku*, a small insect.

Viti: *kutu*, the louse.

Deni, Nada, Kiriwina, Mukawa, Raqa: *kutu*, the louse. Murua: *kuti*, id. Arag, Nggela, Bugotu, Sinaugoro: *gutu*, id. Kiviri, Oiun: *guta*, id. Vaturanga: *ngotu*, id. Marina, Lo, Malekula Pangkumu: *gut*, id. Hula, Keapara: *gu*, id. Aneityum: *get*, id. Tanna: *kiget*, id. Motlav, Volow: *git*, id. Makura: *na-kit*, id. Nengone: *ote*, id. Buka: *autu*, id. Motu, New Britain, Malo, Rubi, Dobu, Awalama, Taupota, Wedau,

Kubiri: *utu*, id. Pokau, Doura: *uku*, id. Roro: *uhu*, id.
 Bululaha: *u'u*, id. Galoma: *uu*, id. Alite, Mekeo, Galoma:
u, id. Omba, Maewo, Mota: *wutu*, id. Merlav, Mota, Gog,
 Lakon, Vuras, Mosin, Norbarbar: *wut*, id. Pak, Sasar, Alo
 Teqel: *wu*, id.

Malay, Java, Salayer, Menado, Bolanghitam, Sanguir, Gani, Lariko,
 Gah, Baju: *kutu*, the louse. Bouton: *okutu*, id. Sula:
kota, id. Mayapo, Massaratty: *koto*, id. Macassar: *kuto*, id.
 Ahtiago Alfuros: *kutim*, id. Teor: *hut*, id. Morella, Mata-
 bello: *utu*, id. Caimarian: *utua*, id. Wahai: *utun*, id.
 Mysot: *ut*, *uti*, id.

Arabic: *kurdu'*, the louse.

Pediculus seems from the uniformity of the occurrence of this stem to have been an ancestral possession of the Pacific races in their voyaging. That other source of uneasiness, the flea, would appear a later acquisition, since it is rather commonly described in *kutu* composites as the jumping louse. In Efaté the flea was unknown, the people say, until it was introduced by white visitors.

While the Melanesian forms show a wide range of variation, they may readily be set forth in two series, according as they keep or lose *k*-initial.

1. *kutu*, *gutu*, *ngotu*; *gut*, *get*, *git*, *kit*.
2. *utu*, *ote*, *uku*, *uhu*, *u'u*, *u*.

There remains a group of three forms characteristic of the northern New Hebrides. This seems to involve, in its several forms *wutu*, *wut*, *wu*, the *k-w* mutation which nowhere else appears nor is it exhibited in any other Polynesian loan word in these languages except in the very doubtful *kusue* (251) rat Lakon *wohow*. I incline to look upon this *w* as not at all a *k*-mutant, but rather as an accretion after the *k* has been dropped, a hint that something has vanished. I have suggested the same in *ika* (300) to account for the Javanese form.

In Indonesia we find the same double series, with and without the *k*.

The Arabic *krd'* contains two elements foreign to the Polynesian, of which the protected *r* could not have been dropped arbitrarily.

307.

lāba, to be much, many; **laba**, **leba**, **lafulafu**, to be or become or grow big; **leb**, indeed, very; **barab**, **baraf**, **barau**, long, cf. **barab**, 121.

Samoa: *lava*, to be enough, to complete, the whole, indeed, very.

Nukuoro: *lava*, enough. Nuguria: *hulava*, id. Rarotonga:
rava, much. Rapanui: *rava*, to be able, capable; *hakarava*,
 to make large. Maori: *rava*, numerous, many, quite, very,
 at all. Hawaii: *lawā*, enough, a sufficiency. Niuē: *leva*
 (in *o leva*), very, quite.

Viti: *levu*, great; *ndrawa*, a thing that fills up.

Mota: *lava*, greatly; *liwoa*, large. Sesake: *lavulavu*, very large.

Merlav, Gog: *lav*, large. Lo: *lilav*, large. Omba: *lawua*, id.

Arag: *gaivua*, id. Fagani: *rafa*, id. Wango: *raha*, id.

Saa: *laha*, id. Deni: *lebu*, id. Mosin, Motlav: *liwo*, id.

Lo: *liliwo*, id. Leon, Sasar, Pak, Volow: *lowo*, id. Vuras, Lo, Alo Teqel: *luwo*, id. Norbarbar: *luwoa*, id. Aneityum: *lupas*, id. Pala: *nabá*, very; *laba*, great. Malagasy: *lava*, long, tall, continuing long. Malay: *luwas*, wide, extensive, large, ample.

Hebrew: *rabab*, to become much or many; *rabah*, to be or become great, to grow up.

There seem to be involved two stems here, one characterized by *a*-forms, the other by some weaker vowel. Yet the consonant structure exhibits a degree of connection between the two.

The *a*-form is the rule in Polynesia, with the exception of Niuē. It occurs in Efaté. It appears in Mota and Viti together with the weaker form, but especially differentiated therefrom. It is found in Sesake, Merlav, Gog, Lo, Omba, Arag (?), Fagani, Wango, Saa, Bululaha, Pala.

Of the weaker type we find *e*-forms in Niuē, Viti, Efaté and Deni. An *i*-form occurs in Mosin, Motlav, Mota, Lo; and *lilav* in the last-named may serve as a transition phase between weak and strong types. An *o*-form is found in Leon, Sasar, Pak and Volow. Forms in *u* come to light in Vuras, Lo, Alo Teqel, Norbarbar and Aneityum.

In Indonesia we are able to identify one instance of the strong and one of the weak form.

The Semitic has at least a resemblance.

308.

langi, the sky, heaven, above.

Samoa, Fakaifo, Tonga, Futuna, Niuē, Uvea, Manahiki: *langi*, the sky. Nukuoro: *langi*, id.; *para-o-te-langi*, rain; *rang*, a day; *huarangi*, noon. Rapanui: *rangi*, sky, heaven, blue. Maori, Rarotonga, Mangareva, Aniwa, Fotuna, Paumotu, Tongarewa: *rangi*, the sky. Nuguria, Hawaii: *lani*, id. Tahiti: *rai*, id. Marquesas: *aki*, *ani*, id. Vaté: *rang*, id.

Viti: *langi*, the sky. Rotumā: *langi*, id.

Moanus: *lang*, the sky; *rang*, day (the lighted hours). Buka: *indengid*, the sky. Tanna: *neai*, id. Malo: *tukaelange*, id. Baki: *lani*, day. Bierian: *ligian*, day. Tanna: *lenyan*, day. Malo: *rane*, light, day. Pokau: *lani*, daybreak, light. Kabadi: *rani*, id. Roro: *rani-ne-rere*, daybreak. Roro: *lani*, wind, time. Waima: *lani*, wind. Wedau: *l'anel'anene*, id. Galoma: *lagi*, id. Dobu, Kiriwina: *iagila*, id. Wedau: *l'agi'na*, id. Galoma: *gagi*, id. Murua: *yagi*, id. Hula, Keapara: *agi*, id. Misima: *lan*, daybreak. Panaieti: *ran*, id. Motu, Nada: *lāi*, wind. Nada: *laina*, id.

Malay, Kayan, Java, Tagalog, Magindano, Sulu: *langit*, sky. Baliyon: *langid*, id. Bugi, Champa, Macassar: *langi*, id.

Togean Islands: *janggie*, id. Malagasy: *lanitra*, id.

Hebrew: *rum*, *ram*, to be high, to raise, to lift up. Ethiopic: *aryam*, heaven.

In this very smooth series of identifications only a few merit comment.

The general signification is the sky, in some obscure fashion conceived of as disposed in concentric layers; for in Samoan legend Tangaloa, self-

existent and heedless creator of all things, rests in the eighth heaven or the ninth. In Nukuoro, where the Samoan influence is altogether paramount, and in Moánu, the first identifiable halting-place of the migration swarm through the eastern gateway, we find the word used for the bright half of the day; this usage occurs in Baki and Bierian of Epi, in Malo, and probably in Tanna. In Moánu we have positive record (*po* 285), and in Nukuoro we are warranted in assuming the common Polynesian practice, that the calendar days are counted by the lapse of darkness. We note with surprise that in these two languages the day sense is differentiated from the sky sense by the use of *r* for the former and *l* for the latter. We are not justified in drawing a conclusion that on this account is there any particular association between these two languages. Moánu marks the exit from Indonesia, Nukuoro can only be understood as a very modern counter current from Samoa; the same differentiation holds in Malo. We have already had occasion (*matangi* 274) to discuss yet another *langi* sense, that of the wind. In San Cristoval *rangi* is the rain.

Buka *indengid* seems resolvable into *in-dengi-d*, the former element functioning as article. We have no other example from Buka of the *l-nd* mutation, but in the table it will be seen that *l-nd*, or its practical equivalent *l-t*, is not unknown. The *d*-final points to the possibility of acquisition from Malay influence, and Buka is within the range of such cruises. Malo *tukae-lange* is clearly a composite, and the former member is not explicable from our scanty memorials of that speech; but the latter element is confirmed in yet another composite, *tae-lage* cloud. Tanna *neai* may not improbably be *ne-(l)a(ng)i*.

The Indonesian identifications are satisfactory, noting only that the *t*-final as a formative element is generally idiosyncratic of this language group.

The only way in which the Semitic can be brought into association with *langi* sky lies in the Efaté preposition (?) *elangi* above. If that becomes "above" by reason of a development of a secondary sense out of the literal "in the sky," then it has nothing to do with this Semitic. If, on the other hand, its primal sense is "above" (possibly akin to Polynesian *lunga*), then it has nothing to do with *langi* the sky. In either way the Semitic is irrelevant even before we consider the amount of its resemblance.

309.

lango, a fly.

Samoa, Tonga, Futuna, Niuē, Uvea: *lango*, the common house-fly.

Nuguria: *lano*, id. Fotuna, Maori, Rarotonga, Paumotu: *rango*,

id. Nukuoro: *nango*, id. Tahiti: *rao*, id. Hawaii: *nalo*, id.

Viti: *lango*, a fly. Rotumā: *lang*, id.

Arag, Omba, Bululaha, Alite, Marina, Maewo, Gog, Mota, Malo, Ulawa, Wango, Saa, Vaturanga, Nggela: *lango*, a fly. Fagani: *rango*, id. Bugotu: *thango*, id. Nggao: *glango*, id. Nengone: *nengo*, id. Bierian: *alago*, id. Motu: *lao*, id. Guadalcanar: *ango*, id. Baki: *jago*, id. Sasar, Vuras, Mosin, Alo Teqel, Laur, Lambell, King, Lamassa, Duke of York, Merlav, Lakon, Pak, Volow, Norbarbar: *lang*, id. Motlav, Lo: *leng*, id. New Britain: *laga*, id. Makura: *na-lag*, id. Malekula: *ne-rag*, id.

Aneityum: *inlag*, id. Murray Island: *narger*, id. Solomon Islands: *lau-au*, id. Pokau: *lalo-maka*, id. Motu: *lao*, id. Doura: *lao-maka*, id. Mekeo: *angu-ma*, id. Roro: *au-maha*, id. Kabadi: *ao-kama*, id. Panaieti: *nagunagu*, id. Nada: *nigunagu*, id. Murua: *nigau-wari*, id. Kiriwina: *nigonagula*, id. Dobu: *nene-wara*, id.

Kayan, Sanguir: *lango*, a fly. Pampangas: *langò*, id. Menado, Bolanghitam: *raingo*, id. Baju: *langow*, id. North Borneo: *lalangou*, id. Tagalog: *langau*, id. Dyak: *lengeau*, id. Malay: *langau*, a large fly, a bluebottle.

Arabic: *lakka'u*, a fly.

With the exception of the *l-n* mutation in Nukuoro and the plain metathesis in Hawaii we encounter nothing calling for note until we have advanced a considerable step into the Melanesian area. By far the greater part of this western region falls somewhere along the regular series of progression downward: *lango*, *rango*, *lang*, *leng*, *lao*, *lag*, *rag*.

Bugotu *thango* is unique, yet the sense and resemblance may be counted on to carry the unusual *l-th* mutation. The same may be remarked of the prosthetic *g* in Nggao *glango*. Nengone *nengo* and probably Murray Island *narger* are carried in the company of Nukuoro *nango*, the *l-n* mutation appearing in no less than five Polynesian languages, and in Melanesia several times recurring in *lima* (313). The Epi forms are out of step, for Bierian without explanation acquires an initial vowel *alago*, and Baki *jago* presents an *l-j* mutation which is supported only by *lingi* (154) to pour Aneityum *aijangjing*, and *lima* (312) five Epi *jimo* Aneityum *ni-jman*. Motu *lao*, as is a by no means uncommon accord between these two widely separated languages, is Tahiti *rao*. The dropping of the *l* in Guadalcanar *ango* appears nowhere else in the life-history of the word; the form is recorded by Tregear without statement of its source; it is clearly from a speech other than Vaturanga. The same author preserves the Solomon Island *lau-au*, but with no record of what one of the many languages of that archipelago employs it; there is such a resemblance to Malay and Dyak forms that I have little hesitation in assigning it to the Post-Polynesian period.

The Indonesian forms exhibit the usual local peculiarities in dealing with loan material, but the sense is plain.

The Arabic most resembles the Indonesian, differing therefrom most markedly in the intrusion of a palatal between *a* and *u* in the final syllable, and this is the point where the Indonesian forms least resemble the Proto-Samoan. We shall, therefore, have to regard the Semitic as yet farther removed from suggestion of a common origin with the Polynesian and Melanesian stem.

310.

lau, kalau, kolau, kalai, a spiderweb.

Samoa: *apungaleveleve*, *apongaleveleve*, a spider, a web. Tonga: *kaleveleve*, a large spider. Futuna: *kaleveleve*, a spider, a web.

Niuē: *kaleveleve*, a cobweb. Nukuoro: *halaneveneve*, a spider.

Uvea: *kavelevele*, a spider. Mangareva: *pungaverevere*, a spider.

Paumotu: *pungaverevere*, cloth. Mangaia: *pungaverevere*, a

- cobweb. Tahiti: *puaverevere*, id. Maori: *pungawerewere*, *puawerewere*, *puwerewere*, a spider. Hawaii: *punawelewele*, a spider, a web. Marquesas: *pukaveevee*, *punaveevee*, id.
- Viti: *lawā*, a fishing net; *viritalawalawa*, a cobweb; *butalawalawa*, a spider.
- Sesake: *kalau*, a spiderweb. Mota: *talau*, id.; *marawa*, a spider.
- Motu: *valavala*, a cobweb. Aneityum: *nilva*, a cobweb; *nilvanilva*, caulfat of a pig.
- Malay: *labalaba*, *lawalawa*, a spider; *sarang-lawalawa*, a cobweb.
- Visayas: *lawā*, a cobweb.
- Hebrew: 'arab, to weave.

This word has provided the theme of a curious paper by Mr. Tregear (32 Transactions of the New Zealand Institute, 298).

There is an enormous metathesis here, and for that reason I have ordered my Polynesian material in two groups, *leve* and *vele*. It will be seen at once that the distinction is practically that of Proto-Samoan and Tongafiti, specifically older and later forms. With the Proto-Samoan go the forms in Viti, Efaté, Sesake, Mota, and perhaps Aneityum. Motu is the only Melanesian form in accord with the Tongafiti, and it will be recalled that several times, and no farther away than the last item, I have had occasion to remark upon the resemblance between Motu and Tahiti.

Nor is this matter of the order I-v or v-I the only point of divergence. The stem is found free only in Viti, Efaté, Motu, and perhaps Aneityum. With it in composition we have two distinct elements. The simpler is *ka*, and probably *ta* is the same; Nukuoro *hala* differs, yet we assign it provisionally with this element, for it certainly is not associable with the other. We find *ka* in Tonga, Futuna, Niuē, Uvea, Efaté, Sesake; *ta* we find in Viti and Mota, and in the latter we find a *ma* distinguishing *marawa* the spider from *talau* the web. These are all Proto-Samoan, and they are all found as compounds upon the Proto-Samoan stem *leve*, except Uvea which shows a mixture, Proto-Samoan *ka* and Tongafiti *vele*.

The other compounding stem is, in series, *apunga*, *punga*, *puna*, *puka*, *pua*, *pu*. These are compounded upon Tongafiti *vele*, except Samoa which shows a mixture balancing contrarily the Uvea mixture, for Samoa has Tongafiti *punga* and Proto-Samoan *leve*.

The *lau* of Efaté, Sesake, and Mota will readily be recognized as a degeneration form of a parallel Proto-Samoan stem *lava*, *lav*, *lau*. Aneityum *nilva* seems to be *ni-liva*, of which *n* functions as article and according to the common usage of that language extracts the nearest stem vowel; but *nilvanilva* puzzles me; I can hardly conceive it possible for a word to conduplicate article-stem; this casts a doubt upon the otherwise plain interpretation of *nilva*.

The Indonesian here recorded preserves the Proto-Samoan stem, whereas more commonly it resembles Tongafiti forms.

As to the Semitic; if Mr. Tregear and the Indonesian authorities can find their parent stem in the Sanskrit, and if Dr. Macdonald reads his title to a mansion in Semitic skies, the student of Polynesian may be justified in regarding each with equal doubt.

311.

le, leo, lo, to see; **lele**, to look for; **leo, lo**, to watch, to look.

Samoa: *leo*, to watch. Tonga: *leo, leohi*, to watch, to guard.

Futuna: *leo, leosi*, to watch, to be vigilant. Niuē: *leoleo*, to guard, to watch over, to protect. Uvea: *leoleohi*, to guard.

Viti: *rai*, seeing, to look; *raitha*, to look at. Rotumā: *io*, to look.

Marina: *leleo*, to see. Malo: *leo*, to look; *leleo*, to open the eyes.

Bierian: *mleo*, to look, to open the eyes.

Malay: *liat*, to see, to look. Malagasy: *hiratra*, sight, seeing.

Hebrew: *ra'ah*, to see. Arabic: *ra'a'*, id. Ethiopic: *re'ya*, id.

The Proto-Samoan stem is **leos**.

Our Melanesian forms are in exact accord with the Nuclear Polynesian and with the Efaté *leo*. In Efaté we may easily see in *le* a still further degradation of stem, but *lo* with an internal abrasion is anomalous.

The position of Viti *rai*, *raitha*, is baffling. It suggests a stem *rais* as a parent. If we look upon Efaté as suggesting an origin for *rai*, *raitha* from *rais* raises an insuperable obstacle, for in the series *leos-leo-le* it will be seen that *le* is twice removed from the least hint of *s*, and *rais* would need to have *les* in Efaté, which neither is nor could be found.

The Malay may stand as a good identification, the Malagasy not. Similarly the Semitic has a palatal to prevent identification with **leos**.

312.

lima, five.

Samoa, Futuna, Niuē, Nukuoro, Nuguria, Sikayana, Hawaii: *lima*, five. Maori, Tahiti, Rarotonga, Rapanui, Moriori, Aniwa,

Fotuna, Mangareva: *rima*, id. Tonga, Uvea: *nima*, id.

Moiki: *ngima*, id. Marquesas: *ima*, id.

Viti: *lima*, five. Rotumā: *liam*, id.

Pala: *liman*, five. Epi, Solomon Islands, Sesake, Arag, Makura, Malo, Santo, Nggela, Bugotu, Nggao, New Georgia, Lambell, Moánu, Kiriwina: *lima*, id. Nada: *aqai-lima*, id. Tagula: *go-lima*, id. Brierly Island: *paihe-lima*, id. Bierian: *ilima*, id. Santo Wulua: *kilima*, id. Paama, Omba, Malanta, Likkilikki: *lime*, id. Yela: *limi*, id. Epi: *limo*, id. Baki: *jimo*, id. Tangoan Santo, Marina: *lina*, id. Duke of York, Laur, Lamassa, New Ireland (Port Praslin), Ambrym: *lim*, id. Fro-manga: (Sie) *siklim*, id.; (Utaha) *sukrim*, id.; (Ura) *suorem*, id. King: *telim*, id. Malekula Pangkumu: *erim*, id. Malekula, Wango, Fagani: *rima*, id. Kubiri, Panaieti: *nima*, id. Misima, Panaieti: *nima-ma-panuna*, id. Mukawa: *nima-masiana*, id. Taupota: *nima-ruag'a-i-tutu*, ten. Galavi: *ko-ma-nima-sago*, six. Kiviri: *nim*, five. Murua: *qei-nim*, id. Tavara: *nim-i-tutu*, id. Espiritu Santo: *lum*, id. Tanna: (Weasisi) *karilum*, id.; (Kwamera) *karirum*, id.; (Naviliag) *kadilum*, id.; (Numerat, Nerokwag) *kilkilep*, id.; (Ra'na) *kerkerep*, id. Waima, Roro, Mekeo, Uni, Pokau, Doura, Kabadi, Motu, Domara, Mailu: *ima*, id. Boniki: *ima-i-kove*, id. Sinaugoro, Hula, Keapara, Galoma, Keakalo, Rubi: *imaima*, id. Galavi: *ma-i-kove*, id. Lo: *tevelima*, id. Mota: *tavelimwa*, id. Gog:

tavalima, id. Aneityum: *ni-jman*, *ni-kman*, id. Maewo: *tevelim*, id. Norbarbar: *teveliem*, id. Merlav: *tavalimw*, id. Mosin: *tevelimw*, id. Vuras, Motlav, Volow: *tevelem*, id. Lakon: *tivilem*, id. Sasar, Pak: *'evelem*, id. Leon: *'evelimw*, id. Retan: *tavalemw*, id.

Malay, Java, Cajeli, Morella, Batumerah, Teor, Magindano, Champa, Sulu, Sambâwa, Visayas, Tagalog, Pampangas, Kayan, Mame, Salayer, Sanguir, Mayapo, Massaratty, Amblaw, Awaiya, Caimarian, Teluti, Ahtiago, Baju: *lima*, five. Lampong: *limah*, id. Saru: *limoh*, id. Torean Islands: *limo*, id. Kisa: *liman*, id. Bouton: *limanu*, id. Salibabo: *delima*, id. Timor: *lema*, id. Basakrama: *lemo*, id. Sirang, Gah, Mysot: *lim*, id. Gani: *leplim*, id. Menado, Liang, Bolanghitam, Lariko, Saparua, Matabello: *rima*, id. Jobi, Dorey: *rim*, id. Wahai: *nima*, id. Malagasy: *dimy*, id. Dyak: *ma*, id.

Arabic: *h'amsat*, *h'ams*, five. Mahri: *khomo*, id. Sokotra: *khemah*, id.

The numeral five being in many cases the same word as that for the hand on which the tale is reckoned we shall first note the cases in which the sense differentiation is indicated by a form modification. By comparison with 313 it will be seen that such distinction is found as follows:

	Five.	Hand.	Remarks.
Maori	<i>rima</i>	<i>ringa</i>	<i>m</i> -mutant
Viti	<i>lima</i>	<i>linga</i>	"
Moriori	<i>rima</i>	<i>ririma</i>	preduplication
Marquesas	<i>imi</i>	<i>iimi</i>	"
Wango	<i>rima</i>	<i>rimarima</i>	conduplication
Ulawá	<i>lima</i>	<i>nimanima</i>	" and <i>l</i> -mutant
Fagani	<i>rima</i>	<i>ruma</i>	<i>i</i> -mutant
Tanna	<i>kari-lum</i>	<i>nel'limi</i>	" (inverted order)
Baki	<i>jimo</i>	<i>juma</i>	" and <i>a</i> -mutant
Duke of York	<i>lim</i>	<i>lima</i>	abbreviated five
Laur	<i>lim</i>	<i>lima</i>	" "
Lamassa	<i>lim</i>	<i>lima</i>	" "
Omba	<i>lime</i>	<i>limegi</i>	final accretion (<i>gi</i> noun formative)
Cajeli	<i>lima</i>	<i>limamo</i>	" "
Morella	<i>lima</i>	<i>limaka</i>	" "
Batumerah	<i>lima</i>	<i>limawah</i>	" "
Teor	<i>lima</i>	<i>limin</i>	" " (<i>a</i> -mutant)
Liang	<i>rima</i>	<i>rimak</i>	" "
Maewo	<i>tavalima</i>	<i>lima</i>	frontal accretion of five
Merlav	<i>tavalimw</i>	<i>lima</i>	" " " "
Mota	<i>tavelimwa</i>	<i>limwai</i>	" " " "
Lo	<i>tevelima</i>	<i>limwe</i>	" " " "
Magindano	<i>lima</i>	<i>alima</i>	frontal accretion of hand
Bouton	<i>limanu</i>	<i>olima</i>	" " " "
Menado	<i>rima</i>	<i>rilma</i>	interior intrusion
Nggao	<i>lima</i>	<i>kame</i>	
Bierian	<i>ilima</i>	<i>ma</i>	
King	<i>telim</i>	<i>lama</i>	

Which of these is the primal signification? Is the numeral called by the hand name because of its five digits? Is the hand called by the numeral because its digits tot up five? So far as I have seen, all my predecessors

in these studies have assumed that there is first the hand and then by the accuracy of digital mathematics the numeral has followed.

It has not been found necessary to call the numeral one after some object which is a visible unit in nature: one is not the word for nose, for an instance; nor is two the word for eyes or ears, which as pairs upon the primitive mathematician are surely as visible, tangible, obvious as the five fingers of one hand. Three is found to be independent of any such concrete presentation; four also. Why, then, must five be considered a secondary sense of hand?

As to our English five we might see a beautiful reasonableness in naming it from the fingers of our own mathematical hands. We stick up our fingers in reckoning; the first task of our nursemaid mathematicians at school is to teach the child that sums are no longer to be done on the fingers but on slates with pencils. Thereafter follows mental arithmetic with a new series of tortures all its own.

But in the islands of our study fingers go not up but down for the count. The hand with its digits displayed *coram publico* is zero, cipher, naught. It is the clenched fist which counts most, it reckons five; a usage paralleled, to be sure, in our idiom of that noble art of defending usually most ignoble selves, "I put my 'bunch of fives' in his—" mug, was it? Or peeper? Or possibly breadbasket, this being before the days when solar plexus had given to the ring the dignity of astrological anatomy. The five of the clenched fist I recall from many an island race.

Let me, however, confirm my testimony from an authority who believes that five is the hand, Dr. Codrington (Melanesian Languages 222, note 1):

The way of reckoning on the fingers differs in various islands. In Nengone the fingers are turned up and brought together at five. In the Banks Islands the fingers are turned down. This is often done with the spoken numerals, often without the use of words. The practice of turning down the fingers, contrary to our practice, deserves notice, as perhaps explaining why sometimes savages are reported to be unable to count above four. The European holds up one finger, which he counts, the native counts those that are down and says "four." Two fingers held up, the native counting those that are down, calls three; and so on until the white man, holding up five fingers, gives the native none turned down to count. The native is nonplussed, and the enquirer reports that savages can not count above four.

It may well be that I shall seem heterodox in placing five as the parent sense, yet if there be any meaning at all in the foregoing table I am resting upon demonstrable facts and not upon mere fancy. Many of the languages collated in this and the next item show no difference in form between the two senses, the word is the same. Such instances are negative, they lack evidential value, they prove nothing, they disprove nothing.

This table which I have compiled is far from complete; in many languages I have the five word and the hand word has not been recorded in the scantiness of most of this vocabulary material. Here I have assembled twenty-eight languages, all that I have been able to bring into comparison, in which the five word and the hand word are homogenetic yet variant. I might have extended the list by the inclusion of languages in which the five word is a *lima* form and the hand word is heterogenetic. These I omit, for, while they are not without their value in pointing to a primal five-*lima*, they would beyond that complicate the problem by the addition of incommensurable factors.

We shall then examine these eight-and-twenty languages. Four languages seem to point one way, two dozen point the other. The twenty-four congruent languages have the five-*lima* in its clearest form, and hand-*lima* has undergone some form of secondary mutation, the nature of which is indicated in the remarks.

The four opposing languages are now to be examined for the ascertainment of the value of their testimony. Tanna is an island remote from either of our migration streams, the quality of its Polynesian content is absolutely the lowest in my scale. The five-*lima* and the hand-*lima* are alike obscured by alien admixture, so much so that they are barely recognizable. The testimony of Tanna, therefore, should not for one moment count against the agreement of twenty-four.

The Duke of York has not only *lim* for five, but also *lima*. The possession of the latter is sufficient to remove this speech from this consideration; it belongs in the outer ring in which the five word and the hand word are the same *lima*.

Laur and Lamassa (and King, despite another variation element, may be associated therewith) are really the only evidence in opposition. What do these witnesses amount to against a principle established in our triple area, in Polynesia, in Melanesia, in Indonesia? They are three languages, dialectic variety at best, spoken on the New Ireland coast in the very jaws of the eastern gateway. The source from which I derive the vocabularies contains also a social register, a city directory, of two of these abodes, or huts, of culture: Lamassa has a population of 23 men, 28 women married to them, and 40 single persons including children; King is peopled by 38 women and girls, 30 men and boys. Not many in the census are these who reverse the system of the whole Pacific.

On the whole we may disregard such exceptions entirely. Therefore I am willing to aver that in every case where five-*lima* and hand-*lima* differ it is the latter that is secondary in form; therefore five it is which is the primordial sense; the hand is *lima* simply by virtue of its possession of five enumerable fingers.

The following notes have to do with the varieties in form of the five-*lima*.

In Baki and in some other unnamed dialect of Epi the *o* of *jimo*, *limo*, is explicable on my theory of the neutral vowel; this vowel change is found in Basakrama, Saru, and the Togean Islands in Indonesia. The *l-j* mutation occurs also in Aneityum *ni-jman*. The *m-n* mutation in Marina and Tangoan Santo *lina* is found again in *manu* (317) bird Marina *nanu*, and *mata* (324) eye Marina *nata*. Eromanga shows a *lim*-composite with the element *sik-suk-suo*. Motu *ima* finds its only congener in the extreme east, not in Tahiti this time but in the adjacent archipelago of the Marquesas. Aneityum, with *n*-article and attraction of the nearest vowel, yields two forms, *jiman* and *kiman*, each with the *n* suffix. The former has already been discussed; the *l-k* mutation is found only once again in *lima* (313) hand Nggao *kame* Vaturanga *kima*. We now find in the northern New Hebrides a group of *lima* forms prefaced by *tava* in no less than four vowel variants and a fifth in which the initial *t* has been abraded. Not a word of explanation is offered in any of Codrington's disquisitions upon these numerals. I venture the suggestion that the added element may find some illumination

in Efaté *tefa* (24) to arrange in a row, as one who should tally one-two-three-four, and five-in-a-row, this being as plain to view when the fingers are down as when they are up. The prefix in Bierian *ilima* and Malekula Pangkumu *erim* is probably not a formative accretion; it is very close to such a truly Polynesian use as *e lima* for five, the *e* being the visible sign that *lima* functions as verb. Thus, also, may Santo Wulua and King be accounted for. In Tanna we have (Weasisi, Kwamera, Naviliag) three composites of a *lima* form (*lum*, *rum*) with the initial element *kari*. In two other Tanna forms (Numerat, Nerokwag, Ra'na) we see *kari*-variants (*kil*, *ker*) capable of carrying the five sense without *lum*. Therefore I regard the *karilum* forms as determinant composites in which each member has the same meaning.

In Indonesia the variations are less extreme. We note composites in Salibabo and Gani, but neither *de-* nor *lep-* is at all associable with the composition members which have been found in Melanesia. Wahai *nima* reproduces Tonga, Uvea, and Moiki forms, yet the only trace thereof in Melanesia is found in *lima* (313) hand Saa *ninime* New Ireland *némän* Nifilole *nime* Ulawa *nimanima*, for which we have no record of a five-*lima*. Dyak *ma* finds a transition phase in Motu *ima* and yet more positive support in Bierian *ma* hand.

It is quite impossible to see in Arabic *ḥ'ams* a form homogenetic with *lima*.

313.

lima, nalima na, the hand.

Samoa, Fakaafu, Nukuoro, Futuna, Niuë, Sikayana, Hawaii, Manahiki: *lima*, hand, arm. Liueniua: *makalima*, id. Tahiti, Rarotonga, Nuguria, Aniwa, Fotuna, Rapanui, Mangareva, Paumotu: *rima*, id. Moriori: *ririma*, id. Maori: *ringa*, id. Tonga, Uvea: *nima*, id. Moiki: *ngima*, id. Marquesas: *ima*, *ima*, id.

Viti: *linga*, hand, arm.

Epi, Maewo, Merlav, Gog, Nggela, Arag, Malo, Mota, Santo, Lakon, Bugotu, Buka, Duke of York, New Georgia, New Britain, Baravon, Pala, Laur, Lamassa: *lima*, the hand, arm. Alite: *limalima*, id. New Ireland (Carteret Harbor): *limak*, *bralima*, id. Ruavatu: *lime na manu*, wing of a bird. Omba: *limegi*, hand, arm. Buka: *lema*, id. Mota: *limwai*, id. Lo: *limwe*, id. Kiriwina: *iamila*, id. King: *lama*, id. Marina: *lina*, id. Wango: *rimarima*, id. Mugula, Tavara, Taupota, Galavi, Kubiri, Kiviri: *nima*, id. Suau, Sariba, Tubetube, Panaieti, Tagula, Nada, Dobu, Wedau, Mukawa: *nima*, hand, arm. Ulawa: *nimanima*, hand. Nifilole: *nime*, id. Saa: *ninime*, id. New Ireland (Duffield): *némän*, id. Epi: *sima*, id. Vaturanga: *kima*, id. Hula, Keapara: *gima*, hand, arm. Sinaugoro: *gima*, hand. Nggao: *kame*, id. Epi: *yima*, id. Roro, Motu: *ima*, arm. Mekeo, Pokau, Galoma, Rubi: *ima*, hand, arm. Uni, Doura, Kabadi, Sinaugoro, Galavi, Boniki, Kwagila: *ima*, hand. Kabadi: *imana*, arm. Roro: *imana*, hand. Fagani: *ruma*, id. Epi (Baki): *juma*, id. Oiun: *uma*, id.

- Epi (Bierian): *ma*, id. Aneityum: *ni-jman*, *ni-kman*, id.
 Tanna: *nel'limi(n)*, id. Santo Wulua: *lemantra*, id.
 Macassar, Champa, Sulu: *lima*, hand, arm. Kisa: *liman*, id.
 Cajeli: *limamo*, id. Morella: *limaka*, id. Batumerah:
limawah, id. Magindano: *alima*, id. Bouton: *olima*, id.
 Teor: *limin*, id. Bolanghitam: *rima*, id. Liang: *rimak*, id.
 Menado: *rilma*, id.
 Arabic: *alh'ams*, the fingers.

Most of the form varieties here presented have received consideration in the preceding item. Note should be made of the fact that the meaning includes the whole member from fingertip to shoulder, along the inner aspect as far as the axilla. Two forms, *sima* and *yima*, assigned to Epi without particularization of dialect, are entirely anomalous, yet their derivation from *lima* is not to be doubted. Santo Wulua *lema-ntra* introduces an unexplained element; the same is true of the Tanna composite and of the *bralima* of Carteret Harbor in New Ireland.

314.

lolofa, lulum, lumu, to be wet, moistened; **luma**, to sink, to dip.

- Samoa: *lolo*, *lofia*, to flood, to overflow; *lölö*, to be wet (as the clothes). Tonga: *lolo*, to rain in torrents; *lomaki*, flood, deluge.
 Futuna: *lofia*, inundated, submerged, inundation; *lomaki*, deluge, inundation. Niuë: *lofia*, overflowed. Uvea: *lolo*, to flow; *lovai*, deluge; *lomaki*, id. Maori: *roma*, a stream; *rumaki*, to duck in the water. Hawaii: *lu*, to dive or plunge in the water; *luma*, *lumai*, to put to death by putting the head under water. Mangareva: *akarumakimaki*, to dive often, to inundate. Paumotu: *rumaki*, to sink in the water.
 Viti: *luvu*, to sink in the water, to drown; *luvutha*, to flood, to overflow; *luvuraka*, to put under the water, to press a thing down under the water; *ndrondro*, a current, chiefly of the sea.
 Raluana: *lowon*, a stream; *lolonga*, to flow. Duke of York: *lomom*, a flood. Kiviri: *loloro*, a river.
 Malagasy: *rubuka*, plunged, dipped, soaked.
 Hebrew: *šeba'*, to dip into; *'išṭaba'*, to be wet, moistened. Arabic, Chaldee, id.

We find two stems, **lof** and **lom**, each showing a tendency to vowel shift and appearing as **luf**, **lum**.

The common factor is *lo* or *lu*, the common signification of water and a motion, one of water in motion, the other of motion into water. These senses are not restrictive in the languages which have both stems, and we are not warranted in suggesting more than that there may have been a distinctive value to each of the terminal consonant modulants, but that in the drift along the ages and across the seas the distinction has in some places become obscured.

Stem lof. This is found in Efaté, Samoa, Futuna, Uvea, Niuë, Raluana, with the *o*-radical. This is accordingly seen to be Nuclear Polynesian; the omission of Tonga from the habitat of this stem is due to the fact that our dictionary authority affords no instance which distinctly proves a **lof** form, yet Tonga records *lolo*, which in Samoa is seen to belong to **lof**.

Stem lom. This occurs in Tonga, Futuna, Uvea, Niuē, Maori, and Duke of York with the *o*-radical; and with the *u*-radical in Efaté, Maori, Hawaii, Mangareva, and Paumotu. If it were not for the *u*-radical in Efaté we should be wholly justified in the statement that **lof** and **lom** are Proto-Samoan, **lum** Tongafiti; and this is indeed probable, for Maori *roma* is explicable as carried by the direct migration which our material shows to have passed from Nuclear Polynesia to New Zealand. This would afford us an explanation of *malu* water, the bonito fishing euphemism. It might be a conditional form of the **lum** stem, adopted for this purpose as a slightly alien word and therefore incomprehensible since the bonito understands Samoan perfectly. This would not be the only instance in which the honorific speech has drawn from a foreign source.

In the Viti *ndrondro* is clearly the Proto-Samoan *lolo* (**lof** stem) and the reinforcement of the *r* points out that the primal stem was **rof** with *r* grasseyé. *Luvu* would seem to be a vowel mutation on the **luf** stem derived from a source in which the *r* had become *l*. Against this is to be set the fact of *luvutha* and *luvuraka*. The former implies a stem **luvuh**, **luvus**, or **luvut**; in the latter we may choose to regard, and with much reason, the *r* of *raka* as non-radical and that this termination is applied evenly to all open stems.

Without support in transition forms we are not at liberty to admit the Malagasy, the extraneous *k* being the obstacle.

The Semitic is, of course, beyond the range of possibility; the sole point of resemblance being the *b*, and this is not sufficient to carry the load of the former consonants.

315.

mala, malala, the cleared place in each village where the ceremonial drums are set up; a place or part (as of a garden); **malmal**, a small place or part.

Samoa: *malae*, the town green. Nukuoro: *malae*, a cleared space, an open place, a plantation. Tonga: *malae*, a green, a grass plot. Futuna, Uvea: *malae*, the public place in front of the houses. Hawaii: *malae*, smooth (as a plain). Niuē: *malē*, an open space, plaza of a village. Fotuna: *marai*, public house. Maori: *marae*, an inclosed place in front of a house. Tahiti: *marae*, the sacred place of worship. Mangaia: *marae*, the sacred inclosure of sacrifice. Tongarewa: *marae*, a sacred inclosure. Paumotu: *marae*, a temple. Mangareva: *marae*, a temple. Nuguria: *marai*, an open meeting-place.

Viti: *mara*, a burying-place.

Nggela: *male*, *malei*, a place. Laur: *malár*, a town, a place. Bierian: *ka-mali*, public house, village. Baki: *ko-meli*, id. Malekula: *he-mir*, id.

Malay: *balai*, an audience hall, a reception room.

Arabic: *'arā'*, *'arā*, *'araṭ*, an open place. Hebrew: *'arah*, *ma'ar*, a naked space; *ma'ārah*, a plain or field devoid of trees.

In note 261 I have advanced the opinion that *malae* is in form a conditional derivative of *lae*. This holds of the signification found in Nuclear Polynesia. The secondary sense which the Tongafiti carried to eastern

Polynesia has obscured the *lae* element; but the sacrosanct content of the *marae* in the four-godded theology of eastern Polynesian is after all but a logical outgrowth of the Nuclear Polynesian *malae* as the civic center of social life where god is sole, supreme—and Lucretian. We note with interest that the Maori *marae* is Nuclear Polynesian rather than Tongafiti—again that Samoan voyage due south.

In the Viti *rara* is the town green. *Mara*, therefore, shows the conditional form of this abbreviated *ra*-stem.

In Efaté *mala* is the homotype of Viti *rara*, and the subduplication *malala* is clearly a duplication of stem *la* under the conditional prefix. It is clear, then, that *malmal*, duplicated *mal*, can have nothing to do with *mala*, and there is nothing in the signification to require its association therewith.

In the remainder of our Melanesian material we shall have no difficulty in following out the signification by metonymy, its most conspicuous area standing for the town which surrounds it. The word public house in Epi and Malekula is awkward as suggesting the tavern idea with its connotation in the English mind of the traffic in liquors. Island hospitality maintains the largest house in every hamlet for the reception of visitors, and as this is always at the point of honor on the town green it might reasonably assume the designation thereof. Aneityum has *inmaleom*, *inmaliyum*, *inmalyum*, town or city. At first sight, after dissociating the article *in*, they look like *malae* homogenetics. They are really composites of *in-mal* a collection of objects and *eom* (265) house.

Without supporting evidence the Malay *balai* (Tregear's suggestion) is no more than an interesting resemblance.

The Semitic stems in **rh**. The resemblance to the Polynesian lies only with respect to the *l* of the simple *la*-stem, and this is not enough to serve as a basis for further deduction.

316.

malum, weak, faint, soft. Cf. **malua** 4.

Samoa: *malū*, gentle, easy, soft. Tonga: *malu*, loose, soft, mild, easy. Uvea, Nukuoro: *malu*, tender, soft. Hawaii: *malu*, quiet. Futuna: *malū*, tender. Nuguria: *maru*, soft. Tahiti: *maru*, soft, gentle, easy. Paumotu: *hakamaru*, to grow milder. Rapanui: *maruaki*, to decay.

Viti: *malumu*, weak, faint, sick, soft.

Nggela, Savo, Bugotu: *malumu*, soft. Duke of York: *malumalum*, to faint with hunger; *galom*, soft. Malekula: *malum*, soft, meek, gentle. Laur: *malmalungana*, weak, feeble. Maewo, Merlav, Malo, Mota: *malumlum*, soft. Mota: *malu*, id. Vuras, Santo: *melumlum*, id. Mosin, Norbarbar: *molumlum*, id. Pak, Sasar, Motlav: *mulumlum*, id. Aneityum: *mulmul*, id. Vaturanga: *maluka*, id. Lo: *melunglung*, id. Alo Teqel: *mulunglung*, id. Volow: *melemwlemw*, id. Lambell: *māla*, weak, feeble. Tangoan Santo: *nalum*, soft, meek, gentle. Fagani: *marumurumu*, soft. Lamassa: *manlū*, calm (of the wind. Mukawa: *merumeruna*, soft. Kubiri: *memeruna*, id.

Saparua, Teluti: *malu*, soft. Matabello, Gah: *maluis*, id. Amblaw: *maloh*, id. Batumerah: *maluta*, id. Malagasy: *lemi*, softness, meekness; *malemi*, soft, meek, gentle. Malay: *lâmah*, soft, flexible, weak. Java: *lâmas*, id.

Arabic: *ḥaluma*, *ḥalim'*, to be gentle, weak.

The stem is **malum** or **malumu**. This is in form a conditional of *lumu*, a primitive not yet as such identified.

In the Polynesian we have the utmost abrasion in *malu*. This may perhaps be identified with Lambell *māla*. I have associated herewith Lamassa *manlū*; we are not yet sufficiently acquainted with this recently reported language to know whether *n* is such an infix as is common in the not distant Indonesia, or if *man* is a local form of the common *ma*-conditional.

The **malum** form appears in Efaté and Malekula. Vaturanga *maluka* is not properly in this family; it forms a small group with Eromanga *molokoku*, Sesake *manukunuku*, Mota *manoga*, and Motu *manoka*. On the *m-n* mutation in Tangoan Santo *nalum* see note 312. The Duke of York *galom* may not be *malum*, but there can be no doubting the identity of *lom*.

The subduplicated *malumlum* occupies an interesting position in the New Hebrides and is illuminative of the manner in which loan material is broken in for use by alien race. It will more conveniently be studied by dissection. The *ma*-conditional retains its *a* in Maewo, Merlav, Malo, Mota. It becomes *me* in Vuras, Santo, Lo and Volow. Mosin and Norbarbar have altered it to *mo*. Pak, Sasar, Motlav, and Alo Teqel have allowed it to degenerate to *mu*. If we regard this last as an attraction to the vowel of the *lum* element we shall find the same principle of attraction operative in Volow *melemwlemw*, but not in Lo *melunglung*. The **lum**-stem remains unaltered over the greater part of this subdistrict; in Lo and Alo Teqel it becomes *lung*; in Volow it not only changes to the difficult *mw*, but accompanies it with a vowel change to *e*.

Aneityum *mulmul* offers a problem. Codrington (Melanesian Languages 91) suggests the probability that it is metathetic for *lumlum*; metathesis is rarely employed in Aneityum, but see *pula* (284) to shine Aneityum *laav*, *lav*, and it would be the solitary instance in which we have identified the primal stem *lum*. On the other hand Aneityum has taken such liberties with its Polynesian loan material that if we regard *mulmul* as a degraded *mulumlulu* the foregoing note as to the impracticability of Efaté *malmal* would have far less application. The duplication anomalies of Duke of York *malumalum* and Laur *malmalungana* are less considerable when we record that the remote languages of the eastern portal have developed their duplication mechanics along lines quite other than those which I have established for Polynesia.

In Indonesia the best identification, despite wide vowel diversity, is the Malagasy. Inverting the apparently metathetic Java and Malay forms we find stems in *s*, *mâlas*, *mâlah*, akin to Amblaw *maloh*, probably to Matabello and Gah *maluis*, and by a frequent change akin to Batumerah *maluta*. For this reason the *malu* of Saparua and Teluti, despite its present identity with Polynesian *malu*, probably is an abraded *malus*.

In the Arabic *ḥaluma* we should have a close resemblance if it were possible to establish the identity of *ḥa* as a conditional and homogenetic with *ma*.

manu, a bird.

Samoa, Tonga, Tahiti, Mangareva, Rarotonga, Mangaia: *manu*, birds and animals in general. Futuna, Niue, Uvea, Fotuna, Bukabuka: *manu*, animals. Maori, Hawaii, Nuguria, Rapanui, Marquesas, Tongarewa: *manu*, birds. Paumotu: *manu*, birds; *manumanu*, animals, insects.

Viti: *manumanu*, birds and animals. Rotumā: *manman*, birds.

New Ireland (Carteret Harbor): *manuk*, bird. Tanna: *manug*, id.

Motu, Sesake, Epi, Bierian, Maewo, Mota, Ulawa, Wango, Bululaha, Fagani, Saa, Arag, Omba, Vaturanga, Bugotu, Nggela, Nguna, Ruavatu, Ugi, Belaga, Pokau, Kabadi, Sinaugoro, Hula, Keapara, Galoma, Rubi, Suau, Nada, Awalama, Taupota, Mukawa, Wedau: *manu*, id. Uni: *manumanu*, id. Lambell, Lamassa, Tubetube, New Ireland (Carteret Harbor): *maní*, id. Kiriwina, Dobu: *manua*, id. Moanus: *manuai*, id. Merlav, Mota, Norbarbar, Gog, Vuras, Mosin, Tubetube, Murua, Pala, Laur: *man*, id. Brierly Island: *maan*, id. Aneityum: *in-man*, id. Makura: *na-man*, id. Eromanga: *menok*, id. Baki, West Epi: *menu*, id. Pak, Motlav, Norbarbar, Sasar, Volow: *men*, id. Malekula: *ni-min*, id. Vanua Lava, I.o, Alo Teqel, Retan: *mon*, id. Alite: *malu*, id. Marina: *nanu*, id. Kubiri, Raqa, Oiun: *mamu*, id. Lakon: *mah*, id. Tagula: *ma*, id.

Malay, Sulu, Visayas: *manuk*, bird. Guaham: *manug*, id. Savu, Kisa, Menado, Sanguir, Sula, Morella, Caimarian, Bajau, Salibabo: *manu*, id. Togeian Islands: *manu*, the domestic fowl (*tonji*, bird). Bouton: *manumanu*, bird. Amblaw, Awaiya: *manue*, id. Cajeli: *manui*, id. Mayapo: *manuti*, id. Teluti: *manuo*, id. Ahtiago: *manuwan*, id. Kayan, Magindano, Matu, Gah, Matabello, Teor: *manok*, id. Bolanghitam: *manoko*, id. Sapparua, Lariko, Liang, Batumerah: *mano*, id. Gani: *manik*, id. Waigiou Alfuros: *mani*, id. Dyak: *monok*, id. Wahai: *malok*, id. Malay: *burung*, id. Malagasy: *vuruna*, id.

Hebrew: *parah*, to fly. Syriac: *pārah*, id.; *parohto*, birds. Arabic: *farhu*, young of birds. Hebrew: *efroah*, id.

Several of the early missionaries comment with a fine sense of humor upon the mistake the islanders made in calling the cow when first seen a bird. This is the word which led the good missionaries into the error of their own ignorance.

Manu is as wholesale in its signification as our word animal, it is generic. In the paucity of brute mammalia the first missionaries found this general term most frequently used of birds, and it was their and not a Polynesian mistake to translate *manu* into bird. In the material here collected it will be seen that the significations animal and bird are widely extended. In the Paumotu insects are included; the same is true of Mota, where *manu* signifies beetle as well as bird. Nor is its applicability restricted to earth and air; it reaches into the sea as well. Samoa uses *i'amanu* (fish-animal) for the whale, and see note 130 for a discussion of *manu* in the fish sense. Lakon *mah* means bird and fish. If this stood by itself we might accept it

as *manu* in an advanced stage of dilapidation; but since it appears as *mes* in Vuras and as *masi* in Maewo we see that it can not be from the *manu*-stem.

Aside from this Lakon *mah* the Melanesian identifications are sufficiently satisfactory to pass without detailed comment. We find a final palatal in New Ireland, Tanna, and Eromanga. The former might be ascribed to a Post-Polynesian Indonesian source, but Tanna and Eromanga lie outside the limits which we may conveniently assign to the raids of Dyak prahus. On the other hand, if we ascribe the *k*-final to a stem *manuk* we shall be forced to regard that as earlier than *manu*, both from the internal motion of the language and from the fact that these two languages in general preserve primitive forms. Two objections arise in opposition to the view that *manuk* is primordial: one that the *k*-final has not been preserved in those Melanesian languages which have an idiosyncratic disposition toward closed stems, and these are the languages in which the word appears as *man* and variants; the other that Indonesia in general preserves the later rather the earlier Polynesian forms, Tongafiti rather than Proto-Samoan. The Moánu*s manu*ai** may be a local suggestion of inflection; yet since that language is the propylon of the eastern gateway, the nearest to Indonesia, we need have no hesitation in recognizing its association with such forms as Ahtiago *manuwan*, Teluti *manuo*, Amblaw and Awaiya *manue*, Cajeli *manui*. These occur in Ceram and Buru, south of Gilolo, and one might expect to find their influence most prominently felt through the southern gateway; but our earliest records from New Guinea distinctly mention Ceram as the source of the Malay raids along the north shores of that great island, therefore in the direction of Moánu*s*.

The preponderance of *manuk*-stems is manifest in the Indonesian record. Wahai *malok* shows the same *n-l* mutation as Alite *malu*. Malay *burung* and Malagasy *vuruna* are clearly homogenetic *inter se*; equally they are dissociated from the common word of the three island areas.

If the Semitic has even a resemblance it can only be to the Malay and Malagasy, therefore none with the *manu* or *manuk* of this study.

318.

matě, to die; **matěmatě**, to be quiet, soft, gentle; **matian**, death; **matingo**, the grave.

Samoa: *mate*, to die (used of beasts; *oti* used of mankind). Tonga, Fakaafu, Futuna, Niuē, Uvea, Vatē, Maori, Tahiti, Rarotonga, Marquesas, Mangareva, Bukabuka, Manahiki, Paumotu: *mate*, to die. Nukuoro: *mate*, id.; *hakamate*, to kill. Rapanui: *mate*, ill, dead, to die; *hakamate*, to murder. Tongarewa: *mate*, death. Nuguria: *umate*, dead. Aniwa: *komate*, to be dead. Hawaii: *make*, to die. Fotuna: *kono-mate*, to die; *tah-mate*, death. Viti: *mate*, to die.

Merlav, Maewo, Omba, Arag, Marina, Malo, Bierian, Sesake, Nggela, Vaturanga, Nguna, Motu, Solomon Islands, Suau, Mota: *mate*, to die. Tubetube: *unui-ia-mate*, to kill. Fagani, Wango, Mekeo, Ulawa; *ma'e*, to die. Doura: *make*, id. Kiriwina: *katumata*, to kill. Dobu: *loe-masa*, id. Saa: *ma'e*, *ma'esie*, to die; *ha'ama'esie*, to kill. Ugi: *mae*, to die; *haamaesi*, to kill. Santo: *mati*, id. Nada, Massim, Murua: *mati*, to die. Mosin, Gog,

Lakon, Norbarbar, Retan, Pala, Laur, Lamassa, Duke of York, Motlav, Volow: *mat*, id. New Britain: *matmat*, *makmak*, sick, faint. Lambell, King: *imāt*, to die. Buka: *nimat*, *matte*, *maten*, sick; *mat*, *matte*, *amatte*, dead. Pak, Alo Teqel; *ma'*, to die. Sasar: *ma*, id. Ambrym: *mar*, id. Sinaugoro: *mase*, id. Motu: *maze*, id. Kiriwina: *masisi*, id. Aneityum: *mas*, id. Vuras: *meat*, id. Lo: *met*, id. Malekula: *mej*, id. New Ireland (Duffield): *oumet*, id. Lifu: *meci*, id. Leon: *me'*, id. Iai: *mok*, id.

Motlav, Vuras, Lakon, Retan, Marina, Vaturanga: *mate*, death. Merlav, Malo, Mota, Maewo: *matea*, id. Omba, Bierian, Arag, Nggela: *mateana*, id. Fagani: *ma'efa*, id. Wango (upland): *ma'ha*, id. Ulawa: *ma'enga*, id. Mosin: *mata*, id. Pak, Sasar: *ma'a*, id. Volow, Norbarbar: *mete*, id. Alo Teqel: *me'e*, id. Lo: *miji*, id. Malekula: *mejan*, id.

Macassar: *mate*, dead. Malay: *mati*, to die. Malagasy: *maty*, dead; *matimaty*, lukewarm. Kisa: *maki*, dead. Magindano: to die. Arabic: *māta*, to die, to become calm (of wind), to soften by cooking.

The employment of *oti* in Samoa for the death of a man is not so much euphemism as the paying of proper respect to the superior animal, for *oti* (219) means finished. To the high-minded Samoan there can be no sympathy with Ecclesiastes: "the sons of men are a chance and the beasts are a chance, and one thing befalleth them; as the one dieth, so dieth the other; yea, they have all one spirit; and man hath no preeminence above the beasts."

Not the meanest Samoan sinks to the level of the brute, even in the article of death. The beast dies, the humblest of men at least finishes.

For them of high degree there is yet more compliment; the head of the house dies not, but goes to the council (*usufono*), the chief goes on in majesty (*maliu*, *afio*), the heavens are rent in twain (*masaesaelelangi*), and the rain beats down (*timuto*). Certain families die with circumstance. Death comes not to Tangaloo, he has but gone far afishing (*ta'atiu*); and similarly on Asiata's demise the stools of bamboo are swept clean away (*tafealetau'ofe*), such a fishing has he gone upon. When Tuala goes the very winds hold their peace (*matangitongaina*); over the funeral mats of Fiamē the moon comes tumbling out of the sky (*pā'ūlemasina*); when Te'o's eyes are closed darkness palls the land (*polenu'u*), and when Mata'afa leaves the earth the heavens are turned upside down (*mafulilelangi*). If this be euphemism it is of the *n*th power.

In Melanesia we find a considerable area in which the full form of the *mate*-stem is preserved, and within it is a district at the extreme south of the Solomon Islands in which the *t* vanishes. Rudely and at a considerable distance Lifu *meci* may be considered to preserve the full stem, yet with such a *t-k* mutation as is found near by in Iai *mok*, in one of Tregear's unprecisely localized New Britain forms, and in Hawaii and in the most modern Samoan. Interlaced with the *mate*-area is another equally considerable in which we find the abraded *mat*. Aneityum *mas* rests upon the *t-s* mutation, which is rather well established; it appears in Ugi *haamaesi* and occurs again in *sa* (337) bad Aneityum *has*. Vuras *meat* probably

results from the insertion of *e* before *a* and *i* before *e* in a closed syllable which Codrington (Melanesian Languages, 322) notes as characteristic of Volow; there is, however, a possibility that it is rudely metathetic. Abrasion proceeds still further to *ma* in Pak, Alo Teqel, and Sasar, and with vowel change to *me* in Leon. The noun forms follow the same course.

In Indonesia the stem is rare, but the identifications here presented are satisfactory.

The Semitic bears a strong resemblance.

319.

mē, memē, urine; mē, mēa, to make water, to flow, to wet.

Samoa: *mimi*, to make water; *mianga*, urine. Tonga, Futuna, Niuē, Tahiti, Rarotonga, Marquesas, Mangareva: *mimi*, urine, to urinate. Paumotu, Nukuoro: *mimi*, to urinate. Nuguria, Rapanui: *mimi*, urine. Maori: *mi*, to urinate; *mimi*, urine, to urinate; *mianga*, urination, to urinate. Hawaii: *mi*, *mimi*, *mia*, to urinate; *mi*, *miana*, the place for urinating, the member employed; *mimi*, urine.

Viti: *mi*, *mimi*, urine, to urinate.

Lamassa, Lambell, New Britain: *mimi*, urine, to urinate. Laur: *mim*, urine. Aneityum: *ami*, to urinate. Tanna: (*t*)*ami*, id.; *n-ami*, urine. Baravon, Duke of York: *minimi*, to urinate. King: *minime*, urine. Motu: *mei*, urine. Mota: *meme*, urine, to urinate. Malekula: *meme*, to urinate; *ne-me*, urine. Malo: *meremere*, urine, to urinate.

Malagasy: *amani*, urine; *mamani*, to urinate.

Arabic: *māha*, to have water (of a well), to leak (of a ship), to pour water. Hebrew: *me*, euphemism for urine.

The Proto-Samoan stem is clearly *mi*, for had it been a closed stem the commonly abraded consonant would have been preserved in the Samoan derivative, whereas we find it *mianga*.

This stem is preserved through Melanesia with but few variations. For Malo *meremere* we can suggest no principle upon which to account for the *r*. Our other variants look toward Malagasy in two ways. Aneityum and Tanna have its introductory *a*, which is inexplicable. In the eastern gateway we find the pure Polynesian *mi*, yet within sight of New Britain and New Ireland we find *minimi* on the Duke of York Group and even in New Britain itself in Baravon; and in New Ireland King *minime* marches with Laur, Lambell, and Lamassa *mimi*, *mim*. This introduces the Malagasy *n*. I prefer to regard it as an infix and ascribe it to Post-Polynesian influence from Indonesia.

As we have no supporting evidence in Indonesia the Malagasy forms may not wholly be accepted nor yet wholly denied.

The Hebrew *me* is a resemblance, the Arabic *māha* is foreign in sense and not easily to be reconciled in form.

320.

mēlu, shade, protection; melu, melumelu, to be shady.

Samoa, Tonga, Futuna, Niuē, Uvea: *mālu*, a shade, a protection, to be sheltered, to be shaded. Hawaii: *malu*, a shade, a

shadow. Tahiti, Rarotonga, Mangareva: *maru*, id. Rapanui: *hakamaru*, to cover with shade; *marumaru*, a shade, dark; *koona* (place) *marumaru*, a shelter. Maori: *maru*, to be shaded, sheltered. Fotuna: *marumaru*, to be clouded, shade. Nukuoro: *maru*, a shadow. Paumotu: *hakamaru*, to shadow. Marquesas: *mau*, a shade, a shadow.

Viti: *malumalu*, shade.

New Britain: *malur*, shade. Baravon: *malmalur*, shady. Duke of York, Kabakada: *marum*, night. Matupit: *marum*, darkness. Lambell: *morrom*, dark. King: *mirrum*, id. Mota: *malu*, shade. Malo: *mala*, id. Malekula: *na-mor*, id. Baki: *vamelu*, id. Bierian: *fomelu*, id.

Malagasy: *malomaloka*, shady, cool, gloomy.

Hebrew: 'afel, 'afal, obscure, dark; 'amel, 'amel, to languish, to droop, to hang the head.

The Proto-Samoan stem is *mālu*, in contradistinction from *mālū* cool of the *malung*-stem.

The Polynesian and Efaté are in sense agreement. The vowel *ā* of Samoan *mālu* would readily be represented in Efaté by *ē*; the *ē* is not explained.

In other of the New Hebrides the identifications may be followed readily as noted above. For comparison I include here Aneityum *nalmui*, *nalmun*, picture, shadow; removing the *n*-article and restoring the attracted vowel to its proper position we find a stem *lamu* which might be admitted as metathetic *malu*. In the eastern gateway we find what seems to be a very probable group of identifications; in sense the passage from shade to darkness and thence to night is a rational chain, and there is no more form difficulty in *malu-malur-marum-mirrum*.

The Malagasy is probably homogenetic, but in the absence of central Indonesian forms we may not be positive.

Where the Hebrew agrees in meaning it is remote in form; where the form seems to come into some suggestion of resemblance the sense is remote.

321.

mini-ngi, minu, minu-ngi, munu, munu-ngi, munuma, to drink.

Samoa, Fakaifo, Nukuoro, Tonga, Futuna, Niuë, Uvea, Nuguria, Maori, Tahiti, Hawaii, Marquesas, Mangareva, Mangaia, Tongarewa, Rarotonga, Manahiki: *inu*, to drink. Aniwa: *inumia*, id. Rapanui: *unu*, to drink; *hakaunuora*, to water, to make to drink. Sikayana: *unu*, id. Fotuna: *no-cinu*, id.

Viti: *ngunuva*, *unuma*, to drink. Rotumā: *inu*, id.

Malo, Roro, Mekeo, Motu, Waima: *inu*, to drink. Motu, Pokau: *inua*, id. Nggela: *inu*, *inuvia*, id. King: *inim*, id. Kabadi: *inura*, id. Uni: *inui*, id. Hula: *niu*, id. Sinaugoro, Keapara, Galoma, Rubi: *inua*, id. Uni: *bibinu*, id. Duke of York: *inim*, id. Motlav: *in*, *nin*, id. Malekula: *min*, id. Mota: *un*, *unuv*, *ima*, id. Panaieti: *im*, id. Misima: *nai-im*, id. Lo: *m-un*, id. Nguna: *manu*, id. Makura: *munum*, id. Epi (Baki, Bierian): *muni*, id. Marina: *o'omia*, *ulumia*, id.

Sariba, Tubetube, Dobu: *numa*, id. Tanna: *numi*, id. Suau: *nom*, id. Tavara: *uma*, id. Taupota, Wedau, Galavi, Boniki: *umai*, id. Awalama: *umaia*, id. Kiriwina: *mum*, id. Tanna: (*t*)*amanum*, id. Kiviri: *toman*, id. Raqa: *tanuma*, id. Kubiri: *toma*, id. Oiun: *tom*, id. Murua: *amomu*, id. Aneityum: *umnyi*, id.

Malay: *minum*, *pinum*, to drink. Pampangas: *minom*, id. Magindano: *ominum*, id. Tagalog: *ominom*, id. Malagasy: *minnuna*, id. Java: *nginum*, id. Togeian Islands: *mangino*, id.

Syriac: *mistuta*, to drink. Chaldee: *s't'a'*, *'is't'o'*, id. Hebrew: *s'at'a*, id. Ethiopic: *sataya*, id. Hebrew: *s'akah*, id. Arabic: *saka'*, id. Ethiopic: *sakaya*, id.

It is by no means easy to determine the primal stem. We shall best consider the series of forms, paying no regard here to the vowel change.

inum. Polynesia *ubique*, Viti, Rotumā, Malo, Motu, King, Duke of York, Motlav, Mota, Tanna, Marina.

minum. Efaté, Malekula, Lo, Nguna, Makura, Baki, Bierian, Tanna, Malay, Pampangas, Magindano, Tagalog, Java.

minung. Efaté, Malagasy, Togeian Islands.

inuv. Nggela, Mota.

nginuv. Viti.

The vowel interchange appears not to be critical, for most of the *i*-forms are paralleled by similar *u*-forms.

The common factor of all these stems is *inu*; this may be modulated by a final *m*, *ng* or *v*, and by a frontal *m*, *ng*. If we take the position that *m* and *ng* may stem in a common parent we have simplified the problem in but a small degree; we still have to consider an *inu* which may be introduced by a nasal and which may close in a nasal or a labial spirant.

After the preceding stem classification we need comment on but a few more irregular phases. In Motlav *nin* we find an uncoordinate form; *in* may be abraded *inu*, *nin* may perhaps present the central nasal *n*, which should stand in the position of the parent of initial *ng-m*, or it may be some obscure duplication. Mota *un*, *unuv*, falls systematically into the scheme of stems; but the Maligo *ima* seems impossible to place. The Marina forms suggest affiliation with the *inum*-stem; the *n-l* mutation is well established over a wide area, but this is the only case in which it is found in Marina; and the excision in *o'omia* is left unexplained. Tanna *numi* and Epi *muni* are most readily disposed of as metathesis, of the types 2341 and 4321, respectively. Aneityum is very obscure, yet it does seem to preserve a trace of *minu*.

There is, as we have seen, abundance of confusion in the island areas; but not so much as one confounded form comes into the slightest resemblance with the Semitic *st* root.

322.

mirama-ni, **merama**, to be light, to shine; **e-meromina**, in the light (as opposed to **abokas**, the dark and gloomy underworld of Hades), in the world, the world.

Samoa: *malama*, the moon, a light, a lamp or torch, to be light; *malamalama*, to be light. Tonga: *malama*, brightness, to shine. Futuna: *malama*, the world, the universe, a lamp or light, brilliancy. Uvea: *malama*, a light, a lamp, to light up. Hawaii: *malama*, light; *malamalama*, a light, to shine. Sika-yana: *malama*, the moon. Manahiki: *malamalama*, light. Fotuna: *marama*, light; *mrma*, the moon. Nuguria: *marama*, light. Maori: *marama*, the moon, light, to be light, to be bright. Tahiti: *marama*, the moon; *maramarama*, the light, to be light. Mangareva: *marama*, daylight, the moon. Rapanui: *marama*, brightness, light, day, to be bright; *hakamarama*, to shine. Rarotonga: *marama*, the moon, the light, bright, shining. Nukuro: *marama*, the moon, bright. Niue: *maama*, light, to light up. Marquesas: *maama*, light of day; *meama*, the moon. Aniwa: *umrama*, the months. The month sense is found in Tahiti, Marquesas, Rarotonga and Maori associated with the moon signification, and in Hawaii is specifically dissociated therefrom to characterize a solar month.

Viti: *malamalawa*, the early part of the morning before daylight; *rarama*, light, *rāmaka*, to cast light upon; *ramaka*, shining from a distance.

Sesake: *marama*, to be light. Gog: *marmaran*, to be lighted. Motlav: *memreren*, to become light. Volow: *mereren*, id. Tanna: *mararen*, light. Mota: *maran*, light, morning. Merlav: *maran*, light; *mamaraniga*, lightsome. Bugotu, Nggela: *marara*, light. New Britain: *malana*, light. Kalil: *mālau*, bright. Nengone: *nerene*, to shine; *nereneni*, to light. Aneityum: cf. *alauma*, to blaze. Bierian: *mamama*, light.

Kayan: *mala*, a light, flame.

Arabic: *lama'a*, to shine.

The Proto-Samoan stem is **malamang**, as shown in *malamalamangia*. The duplication form shows this to be a composite of the two stems *mala* and *mang*; thus it must be kept apart from forms of *lama*, which in Polynesia has the lighting sense only as secondary to its primal signification of a torch.

The presence of *n* in Efaté *mirama-ni* and *eromina* serves to associate these forms with the **malamang**-stem. Sesake *marama* is plainly Polynesian *malama*.

Beyond these two points we seem forever on the verge of establishing an identification and as steadily the light proves to be but will-o-the-wisp glimmer. In Viti *malamalawa* is almost Samoan *malamalama*; this would require an *m-w* mutation; but *m* is the least variable of Polynesian consonants, our material not affording one instance of this hypothetical mutation; the nearest is *m-v* in the solitary instance of *ma'i* (323) sick Nggela *vahagi*. The other Viti examples stem in *lama*, and that is contraindicated.

The nearest approach to *malama* in the doubtful Melanesia is New Britain (not specified) *malana*; on the *m-n* mutation see note 312. The *marara* of Bugotu and Nggela requires an *m-r* mutation, for which we find no support. In the New Hebrides we find various phases of a stem which at its simplest

is found as *maran* in Mota and Merlav. It is quite plain that if *maran* is to be associated with **malamang** at all, it can only be with the composition element *mala*; this *maran* may be recognized in New Britain *malana* in its full strength and, after abrasion, as a subduplication form in *marara*. From *maran* the duplication of *mar* gives us Gog *marmaran*, yet side by side with this we find in Merlav *mamaraniga* a duplication of *ma* and not *mar*. Tanna *mararen* and Volow *mereren* require a peculiar duplication of *ran*. Motlav *memreren* joins to this anomalous duplication of *ran* an equally irregular duplication of *ma*. Kalil *mālau* may derive from the abraded form of *maran*. Nengone *nerene*, if we may accept the initial *m-n* mutation, brings us to a yet more archaic form of *maran* as an open stem *marane*, and that the *ne* is radical is made manifest by the subduplicated *nereneni*.

Kisa *mala* is in kinship with this *maran*.

The Semitic **Im'** skeleton is alien.

323.

misaki, masaki, to be sick, to be ill, to have fever; **misaki, misakia**, sickness.

Futuna: *masaki*, sick, illness. Tonga: *mahaki*, id.; *mahamahaki*, feeble. Niuē: *mahaki*, very great. Uvea: *mahaki*, sick, ill. Maori: *mahaki*, a cutaneous disease. Marquesas: *maki*, a wound. Rapanui: *maki*, a wound, plague. Mangaia: *maki*, sick, sickness. Mangareva, Nuguria, Paumotu: *maki*, sick, ill. Fotuna: *maki*, *makinga*, ill. Samoa: *ma'i*, sickness, to be ill; very. Tahiti: *mai*, disease. Hawaii: *mai*, sickness in general. Rapanui: *mai*, to be ill; a boil.

Viti: *mathake*, specifically apthae or thrush.

Malekula Pangkumu: *meseke*, sick, sickness. Epi: *msaki*, *miei*, id.

King: *miseit*, sick. Saa: *matai*, id. Nggela: *vahagi*, id.

New Britain: *maki*, *makmak*, *matmat*, id. Baravon: *mait*, id.

Aneityum: *mehe*, sick; *masaki*, leprosy. Mota: *masag*, ague.

Ilocan: *masaquit*, sick. Silong: *makit*, id. Kisa: *maki*, dead.

Malay: *sakit*, sick.

Arabic: *s'aka'*, to afflict one with a disease; *s'akat*, disease; *mas'kuww'*, afflicted with a disease.

In Polynesia the line of demarcation between **masaki** and **maki** is the classic division between the Proto-Samoan and the Tongafiti migrations, **masaki** pertaining to the older stock. That Samoa has the Tongafiti form need cause no surprise, for in Samoa the Proto-Samoans were held under Tongafiti subjugation until the historic battle of Matamatamē. Similarly the presence of Proto-Samoan **masaki** in the Maori is but one more incident of that direct migration from Nuclear Polynesia to New Zealand which we have already isolated, and this reading is corroborated by the special use of *mahaki* as the name of one disease in particular. We observe a like particularization in Rapanui, Viti, Aneityum, and Mota.

In Niuē the expletive *mahaki* finds its parallel in Samoa in the same use of *ma'i*. "A plague on both your houses."

Efaté preserves the true *masaki* form, and Epi (Bierian) *msaki* is but slightly altered therefrom. Nggela *vahagi* would be reducible to *masaki* by

applying an *m-v* mutation. *Mota masag* and *Malekula Pangkumu mesek* are abraded forms. *Aneityum mehe* is a further abrasion of *mesek*. *Saadrops* all its *k*'s; therefore we can restore *matai* to *mataki*, but we have no instance of *s-t* mutation in that language and perforce must deny ourselves this identification. King *miseit* needs but the restoration of *k* to come into agreement with Indonesian forms which have final *t*, Ilocan *masaquit* and Malay *sakit*. Baravon *mail* by the same restoration comes into agreement with Silong *makit* of the Tongafiti stem. Furthermore New Britain *maki* is the same as Kisa *maki*. These three forms may be ascribed to Post-Polynesian intercourse with Indonesia.

In form *masaki* sick is a conditional and implies a primal noun *saki* illness. This *saki* is found perhaps in Maori *hakihaki* the itch, and then not in quite the signification demanded; again in the Malay with the same falling short in sense. Thus we see that, while the Arabic with its *s'akat* and *mas'kuww'* offers a specious resemblance, it is after all a resemblance to something which does not really exist in our island languages.

324.

mita, meta, bakamita, to look at, to watch, to observe, to view; **mita na**, the eye, the beginning, a bud or shoot, a window or door or other opening.

Samoa: *mata, matamata*, to look at, to see, to view; *mata*, the eye, the face, the point, the edge, a mesh, the source or origin. Fakaafo, Moiki: *mata*, the eye. Nukuoro: *mata*, the eye; *matakite*, soothsayer; *mata*, the point; *matakapupu*, blunt; *matapunou*, blunt; *mata*, the face, looks; *matapaupau*, ugly; *matatenua*, pretty; *mata*, any small thing; *matatau*, raindrops. Tonga: *mata*, to be seen; *mamata*, to see; *mata*, the eye, the face, the edge, a mesh. Futuna: *mata*, the eye, the face, the point of a lance; *mamata, matamata*, to see, to look at, to view. Niue: *mata, mamata*, to look at; *mata*, the eye, the face, an edge, a blade, a point of land. Uvea: *mata*, the eye, the face, a point; *mata, matamata*, to look like. Nuguria: *mata*, the face, to see; *anomota*, the eye. Maori: *mata*, the eye, the face, the edge, the point, the mesh; *matamata*, the point, extremity, source, a headland. Manahiki: *mata*, the eye. Tahiti: *mata*, the eye, the face, the beginning, the edge. Rarotonga: *mata*, the eye, the face, the beginning. Marquesas: *mata*, the eye, the face. Mangareva: *mata*, the eye, physiognomy, the front, the point. Paumotu: *mata*, the appearance of a person. Rapanui: *mata*, the eye, face, visage, aspect. Tongarewa: *mata*, the eye; *matamata*, beads. Fotuna, Aniwa *foimata*, the eyes. Sikayana: *karimata*, the eye; *lofimata*, the face. Hawaii: *maka*, the eye, the face, the point, the edge, a bud.

Viti: *mata*, the eye, the face, the front, the point, the source, the origin. Rotumā: *maf*, the face; *maja*, eye.

Vaturanga, Pala, Kiriwina, Nggela: *mata*, the face. New Georgia: *mata, isumata*, the face. Southeast Epi, Bierian, Sesake,

Malekula, Arag, Maewo, Malo, Redscar Bay, Motu, Sinaugoro, Rubi, Mugula, Sariba, Tubetube, Misima, Nada, Murua, Dobu, Awalama, Taupota, Wedau, Galavi, Boniki, Mukawa, Kwagila, Kubiri, Raqa, Kiviri, Oiun, Port Moresby, Buka, Lambell, King, Lamassa, Moanus, New Ireland (Port Praslin), New Britain, Duke of York, Solomon Islands: *mata*, the eye. Suau, Tavara: *mata*, the eye, face. Lo: *mata*, a spear. Norbarbar: *matak*, id. Maewo: *mataso*, id. Merlav: *matas*, id. Mota: *mata*, the eye; *matag*, to see; *matarag*, to gaze at. Motlav: *mata*, *na-mtege*, the eye. Laur: *mata*, the eye; *mat mata*, the face. Baravon: *matā*, the eye. Volow: *mata*, the eye; *met*, to see. Merlav: *mete*, eye; *mata*, to see. New Ireland (Carteret Harbor): *matak*, the eye. Nggao: *matata*, the face. Brumer Islands: *matada*, the eye. Brierly Island: *matara*, id. Vuras: *matai*, id. Gog: *mate*, eye; *matarag*, to gaze at. Motlav, Vuras, Lakon: *mate*, eye. Kiriwina: *mati*, id. Iai: *emakang*, eye; *nimakan*, the face. Uni, Pokau, Doura, Kabadi: *maka*, the eye. Aneityum: *nes-ngani-mtan*, *ni-mtan*, id. Panaieti: *matan*, id. Deni: *maku*, the face. New Ireland: *mala*, the eye. Tagula: *mara*, id. Pak: *ma'an*, id. Roro: *maha*, id. Mekeo: *ma'a*, the eye, face. Ulawa: *maa*, the face. Fagani, San Cristoval, Malanta: *ma*, the face. Hula, Keapara, Galoma: *ma*, the eye. Ambrym: *meta*, the eye. Santo: *metana*, id. Malekula: *metan*, id. Mosin: *mete*, id. Vuras, Mosin: *mete*, eye; *meteg*, to see. Alo Teqel: *me'e*, *me'egi*, the eye. Pak: *me'ei*, id. Duba: *mat*, id. Gog: *met*, id. Volow: *met*, to see. Lifu: *mek*, the eye. Maewo: *ete*, to see. Norbarbar: *et*, id. Tanna: *nanimē*, *nugane-mti(n)*, the eye; *nupugane-mti*, the face. Eromanga: *nipmi*, *ni-mtu(m)*, id. Marina: *nata*, id. Baki: *mira*, eye, face. Tubetube: *mani*, the face; *manipo*, the eye. Panaieti, Dobu: *manini*, the face. Misima: *maneni*, id. Murua, Kubiri, *magi*, id. Nada, Kiriwina: *migi*, id. Galavi, Boniki: *mag'ig'i*, id. Kayan, Sulu, Savu, Ilocan, Tagalog, Pampangas, Bouton, Sanguir, Liang, Wahai, Baju, Togeian Islands, Salayer, Menado, Bolanghitam, Morella, Lariko, Saparua, Caimarian: *mata*, the eye. Malay: *mata*, the eye, the blade, the edge, the mesh, the source, the origin. Macassar: *mata*, the point, a mesh, a spring, the source. Awaiya: *mata mo*, the eye. Nicobar Central: *matsha*, the face. Matabello: *matada*, the eye. Silong: *matat*, id. Ahtiago Alfuros: *matara*, id. Wahai: *matalalin*, the face. Gah: *matanina*, the eye. Teluti: *matacolo*, id. Batumerah: *matava*, id. Baliyon: *matoh*, id. Ahtiago: *matan*, id. Dyak: *maten*, id. Teor: *matin*, id.; *matinotin*, the face. Kar Nicobar: *mat*, the eye. Kisa: *makana*, id. Tagalog: *mucha*, the face. Java: *muka*, id. Ilocan: *muquing*, id. Madura: *mua*, id. Mysot: *mut morolu*, the eye. Malagasy: *maso*, the eye.

Arabic: 'āna, to emanate (water), to see, to look at.

There is a wide range of significations in this stem. It will serve to express an opening as small as the mesh of a net or as large as the door of a house; it will serve to designate globular objects as large as the eye or as small as the bud on a twig or the drop of rain, and designating a pointed object it answers with equal facility for the sharpened tip of a lance or the acres of a headland; it describes as well the edge of a paddle or the source from which a thing originates. As the islanders find no need to distinguish these and yet other senses no obligation rests upon us to seek to establish an artificial classification. We shall, therefore, in these notes consider only the varieties of form.

In Polynesia the only variants are Hawaii *maka*, a modern kappation, and Rotumā *maja* under the influence of a local idiosyncrasy.

It will be found making for greater simplicity to list the Melanesian forms and the Indonesian irregularities.

mata.	Vaturanga, Nggela, New Georgia, Bierian, Se-sake, Malekula, Maewo, Malo, Arag, Buka, Lambell, King, La-massa, Laur, Moanus, New Ireland (Carteret Harbor, Port Praslin), New Britain, Baravon, Duke of York, Solomon Islands, New Guinea (Port Moresby, Redscar Bay), Lo, Mota, Motlav, Merlav.	matara.	Brierly Island; Ahtiago Alfuros.
matah.	Norbarbar.	matai.	Vuras.
matas.	Merlav.	mat.	Omba; Kar Nicobar.
mataso.	Maewo.	mala.	New Ireland.
matak.	New Ireland (Carteret Harbor).	ma'an.	Pak.
matata.	Nggao; Silong.	maa.	Ulaw.
matada.	Brumer Islands; Matabello.	ma.	Fagani, San Cristoval, Malanta.
		mate.	Gog, Motlav, Vuras, Lakon.
		meta.	Efaté, Ambrym, Santo, Malekula.
		mita.	Efaté.
		mete.	Mosin, Vuras, Merlav.
		me'e.	Alo Teqel, Pak.
		met.	Gog, Volow.
		mek.	Lifu.
		mt.	Aneityum, Tanna, Eromanga, Motlav.
		ete.	Maewo.
		et.	Norbarbar.

This is a startling picture of degradation, yet at no point may we halt for any non plus ultra check to the dilapidation, for each step represents a sufficient transition phase between that which has gone before and that which is to come. Deni *maku* might suggest kappation, but even then the final *u* remains out of accord. Iai *emakang* and *nimakan* are clearly kappation forms. In Tanna *nanimē* and Eromanga *nipmi* it is possible that *mi* or *mē* represents a yet more degraded phase than appears in Fagani, San Cristoval, and Malanta *ma*. Baki *mira* and New Ireland *mala* are to be grouped in development plane, but we have no evidence to establish their connection with *mata*.

In Indonesia *mata* has equal predominance, but there are many variants. Of these, four are to be found in Melanesia: *matada*, *matata*, *matara* and *mat*. Many of these Indonesian variants are composites. The principal stem

diversity is in the occurrence of *u*-forms in *muka*, *muchu*, *muguing*, *mua*, and *mut*, this deviation not being found in the Pacific areas.

The Semitic *āna* resembles *mata* only in the possession of two *a*'s, not at all a basis of association.

325.

mot, motū, island, place, district; lit., that which is broken off.

Samoa: *motu*, an islet, a district; *motu*, to be broken off, snapped asunder, severed. Tonga: *motu*, an island. Futuna: *motu*, an islet. Niue: *motu*, land, island, a country, (?) a clump of forest. Uvea: *motu*, an island; *motu*, to cut off. Nuguria: *motu*, an island, to break. Maori: *motu*, anything isolated, as an island, a clump of trees. Tahiti: *motu*, a low islet. Marquesas: *motu*, an island. Mangareva: *motu*, an elevated island. Rapanui: *motu*, an island, to cut, to break. Rarotonga: *motu*, an island, a grove. Paumotu: *motu-puhere*, an island. Fotuna: *tanga-motu*, forest; *motu tangata*, multitude.

Viti: *Moturiki*, name of an islet near Ovalau.

Mota: *motumotu*, an island; *mot*, bush, uncleared ground, land grown over with trees; *motu*, to break, as string; *mot*, to cut, to break, to stop short off. Duke of York: *mutamuta*, crumbs.

Malay: *putus*, to break. Malagasy: *maitu*, broken asunder, snapped; *maituitu*, broken in pieces; *utusana*, being cut, broken, snapped.

Arabic: *makṭa'*, a place. (Deriving this from *kaṭa'a*, to cut off, Dr. MacDonald provides a common source for *motu* and *koto-fi*).

The Proto-Samoan stem is **motus**.

The island sense is particularly well marked in Polynesia, and the forest sense is closely parallel. In Niue I have felt it right to query the forest sense for the reason that it does not appear in the vocabulary, though it is clearly inferential from Percy Smith's sketch map of the island. In Viti the word is found in one place name, *Moturiki* or little island, yet it is clearly established since this is the only interpretation that the word can have. In Melanesia it has not been recorded save in Efaté and Mota. The Duke of York *mutamuta* may be related, but it lacks confirmatory support.

The Indonesian is uncertain. The Malay requires evidence to uphold the *m-p* mutation. In the Malagasy it is quite unlikely that the composite *ma-itu* can have anything to do with *motu*, and *utusana* calls for an explanation of the abrasion of *m*-radical.

In the Semitic if *makṭa'* stems in a **kt'** root it can have no relation with **motus**.

326.

mu, fu, to coo as a dove.

Samoa: *muī*, to murmur; *mūmū*, words spoken in private conversation; *mūmū*, to be in swarms; *langomūmu*, *langofufu*, the carpenter bee; *muna*, to grumble; *musumusu*, to whisper. Tonga: *muhu*, the sound as of persons talking together; *muhu-muhu*, to speak quietly together; *mumu*, to collect together; *muna*, to talk nonsense; *langomu*, a large fly. Futuna: *muī*, to collect together; *muna*, to speak, to murmur; *musu*, to

whisper. Niuē: *mūmū*, to crowd, to make a noise; *langofufu*, the carpenter wasp. Uvea: *munamuna*, to murmur. Maori: *mu*, a gentle noise; *mumu*, to murmur, to hum; *muna*, to tell privately. Tahiti: *mu*, a buzz; *mumu*, to make a confused noise, as a number of persons talking together; *langomumu*, the carpenter bee; *omuhumuhu*, to whisper to one's discredit. Hawaii: *mumu*, to hum. Mangaia: *mu*, to sigh. Marquesas: *mumu*, a confused noise. Mangareva: *amui*, to assemble, as flies. Paumotu: *muhumuhu*, a dull confused noise; *muhimuhi*, to murmur. Fotuna: *mu*, to buzz; *mumu*, to whisper. Moiki: *muna*, to speak, to say. Nukuoro: *fatumuna*, to lie; *munaputonu*, true; *silengamuna*, to interpret. Rapanui: *huhu*, buzzing.

Viti: *mumu*, to go in troops or swarms.

Motu: *mu*, to coo. Loyalty Islands: *mumu*, the pitcher wasp. Aneityum: *ilmu*, to low (as cattle); *ilmurilmu*, to mumble. New Britain: *mukumuku*, to whisper. Mota: *mum*, to make an indistinct hum.

Nicobar Central: *mumu*, a dove. Malagasy: *moimoy*, a low murmur, a hum; *monomonona*, a grumbling.

Hebrew: *hamah*, to coo, to hum (as a multitude). Arabic: *hamhamah*, to murmur.

I have here collected the principal stems having *mu*-initial for purposes of comparison. Connected with the *mu* of cooing there is a *mu* in Polynesia and beyond, and it is with this that we shall concern ourselves. In Samoa *langomūmu* and *langofufu* it shows the same alternation as in Efātē *mu*, *fu*. This *fu* is found but once more, Niuē *langofufu*. Tonga exhibits this elemental *mu* only in the composite *langomu*. In Futuna this *mu* is absent; for *mui*, which is the same in form as Samoa *mui* to murmur, is here formed upon that *mu* to be a crowd which is found in Samoa, Tonga, and Niuē *mūmū*, and which is probably the same in Mangareva *amui*. In Niuē *mūmū* fails to observe the distinction between *mu* to buzz and *mu* to be a crowd. Fotuna, Maori, Tahiti, Marquesas and Hawaii have preserved this *mu*, and generally without duplication.

Viti *mumu* is the *mu* to be a crowd.

Motu has the same *mu* of sound, Aneityum *ilmurilmu* seems to be some sort of a *mu*-composite, Mota *mum* is readily seen to be *mu* reduplicated and then abraded.

Nicobar *mumu* a dove may quite safely be identified with this *mu* of sound. But in the Malagasy *moimoy*, although the sense is satisfactory, the vowel anomaly is too great to be overcome; and the *monomonona* could be associated only with *muna*.

The Semitic involves elements not present in our *mu*; in fact the only point of form likeness is the *m*, and that is insufficient.

327.

muri na, the after part of a thing.

Samoa, Futuna: *muli*, the end, hind part, bottom, rump, to follow after. Uvea: *muli*, the end, the last, to follow. Nukuoro: *muli*, after, behind, in future; *mule*, slow. Nuguria: *muri*, aft. Rapanui: *muri*, the stern; *i muri*, *ki muri*, afterward,

behind. Maori: *muri*, the rear, hind part, afterward. Tahiti: *muri*, behind, afterward. Rarotonga: *muri*, behind, in the rear of, after. Mangareva: *muri*, behind, after. Paumotu: *muri*, the rear, behind, after. Bukabuka: *tainamuri*, younger. Fotuna: *no-muri*, to follow; *muri*, behind. Aniwa: *wamuri*, behind, after. Tonga: *mui*, the tail (of a bird), the end, hind part, to follow. Niuē: *mui*, the last, to follow; *muimui*, the stern, hind part; *muli*, to follow. Marquesas: *mui*, after, behind. Viti: *muria*, to follow, to go behind. Nggela: *muri*, behind; *tumuri*, to follow. Motu: *murimuri*, outside; *muritai*, the younger. Duke of York: *murimuri*, to follow; *murumuru*, to be behind. Kabakada: *murū*, back; *mule*, again, away. Baravon: *murū*, *murmur*, the last. New Britain: *mulumulu*, to follow after. Pala: *mūr*, id. Matu: *muli*, to return. Pampangas: *mulin*, the stern. Macassar: *kamudi*, rudder, helm. Malay: *burit*, the fundament; *buritau*, the back, hind part, stern; *kamudi*, rudder. Tagalog: *huli*, the stern. Visayas: *uling*, id. Malagasy: *vudi*, the posteriors, stern. Arabic: *'ah'h'ara*, to be behind; *mouh'ir*, stern, hind part; *'eh'ir*, end.

Efaté *muri* is in exact accord with the Polynesian *muli*, *muri*, *mui*. The excision of the *l* in Tonga and Niuē is not a regular mutation in those languages, yet there are other instances. The fact that Niuē has both *muli* and *mui* leads to the recognition of an attempt, not yet completed when the language was set by reduction to writing, to differentiate *muli* to follow and *mui* last. In Bukabuka *tainamuri* we can recognize *tei* (47) younger brother; and in Motu the same elements in a different order, this being still one more instance of the concord of that Torres Straits station with the extreme east of Polynesia. Nukuoro *mule* slow is not a *muli* form; it does not appear in Samoa, a rare instance of the failure to find in the most modern Samoan the source of Nukuoro vocables, but in Niuē *mule* a long time, the source is plain. Since we know Niuē to have been under direct obligations to Samoa we may regard Niuē and Nukuoro as preserving a word which in Samoa went into disuse before record was made of the language.

In Melanesia the *muri* identifications are few and widely scattered. The Duke of York *muri* and *murū* forms afford a transition phase by which we are enabled to accept *murū* despite the vowel modification, and to localize it in the eastern gateway and adjacent New Guinea. The Kabakada *mule* has no such signification as would serve to establish its affinity with the Nukuoro-Niuē *mule* just discussed, or with *muli*.

In Indonesia we encounter great variety of consonant mutation with absolute fixity of the *u-i* vowels. Pampangas *mulin* the stern is in form and in sense a perfect identification, after noting the ephelkustic *n* of this area. Matu *muli* to return is exact in form, but the sense is not so satisfactory. For *l* we have mutations to *r* and *d*; the former so common as not to need discussion, the latter found in Samoa and Sikayana of the Polynesian group and existing in a few traces (*l-t*, *l-nd*, *l-j*) in Melanesia. For *m* we have mutations to *h*, to *v*, to *b*, and to extinction. Not one of

these occurs in Melanesia save *m-v* in the solitary instance of *ma'i* (323) sick Nggela *vahagi*. In Polynesia none is represented, save as it may be considered to exist in the rare *m-p* exhibited in Samoa *tumua'i* the crown of the head Maori *tumuaki* and *tupuaki* Tahiti and Paumotu *tupuaki*. Acceptance of these forms, therefore, should be postponed.

The Arabic *mouh'ir* is clearly a secondary form from stem 'hr, which shows no kinship with any form in which *muli* appears.

328.

namu, mamamami, the mosquito.

Samoa, Tonga, Futuna, Niuē, Uvea, Sikayana, Nuguria, Nukuoro, Mangaia, Paumotu: *namu*, the mosquito. Maori: *namu*, the sand fly; *namunamu*, a blistering plaster. Marquesas: *namu*, a reddish gnat. Tahiti: *namu, ramu*, the mosquito. Fotuna: *namo*, id.

Viti: *namu*, the mosquito. Rotumā: *rom*, id.

Arag, Maewo, Duke of York, Mota, Nifilole, Fagani, Vaturanga, Nggela, Guadalcanar: *namu*, mosquito. Savo: *namunamu*, id. Marina: *namugi*, id. Lakōn: *namug*, id. Bugotu, Buka: *gnamu*, id. Motu, Raqa, Wango: *namo*, id. Mukawa: *namonamo*, the fly. Galavi, Boniki: *namonamo*, the fly; *namokiri*, mosquito. Kubiri: *nanamo*, mosquito. Kiviri: *nanam*, id. Mekeo: *anguma*, the fly. Roro: *aumaha*, id. Merlav, Mota, Gog, Lo, Vuras, Mosin: *nam*, mosquito. Sinau-goro, Hula, Keapara, Galoma, Rubi: *nemo*, id. Dobu: *nema*, id. Sariba: *nimai*, id. Kiriwina: *nim*, id. Norbarbar, Pak, Motlav, Volow: *nem*, id. Sasar: *nom*, id. Malekula Uripiv: *num*, id. Moānus: *njām*, id. Aneityum: *inyum*, id. Alo Teqel: *tom*, id. Tangoan Santo: *moke*, id. Malo: *mohe*, id. Panaieti: *gumu*, id. Tanna: *kumug*, id. Misima: *kimu*, id. Taupota: *himokini*, id. Awalama: *himoioidi*, id. Nada: *simunika*, id. Murua: *sumoniku*, id. Wedau: *imokini*, id. Tavera: *moeoti*, id.

Malay, Bugi: *namok*, mosquito. Dyak: *njamok*, id. Macassar: *njamo, lamu*, id. Kayan: *hamok*, id. Pampangas: *yamuc*, id. Malagasy: *muka*, id.

Arabic: *namus*, mosquito.

It is very difficult to understand the second Efaté form *mamamami*. It does not appear in its proper place in the dictionary nor are any of its parts identifiable in the material which Dr. Macdonald affords. It is quite possible that it would not have found entry under *namu* as an alternative had not our author misread his Samoan and entered the first of his affinities as "Sa. *mamu*." There is no such word in Samoa; the mosquito there, as generally, is *namu*. The only variants in Polynesia are Fotuna *namo*, a very slight change and possibly a fault of dulness of ear on the part of the recorder in catching the light sound of the unaccented final syllable; and Rotumā *rom*. In the latter the *n-r* mutation is by no means uncommon in Polynesia, is well represented in our Melanesian material; and *rom*, in fact, reappears as Tahiti *ramu*.

In Motu and Wango we find a recurrence of the *namo* already noted in Fotuna. Marina *gi* and Lakon *g* are recognized as noun-formative terminations; the peculiar strengthening of the initial in Bugotu and Buka is local to the Solomon Islands. With these notes we shall have no difficulty in following through Melanesia a sequence of *namu-nam-nem-nom-num*. The Moanus *njām*, as in several other vocables noted from that first station of the eastern gateway, may be assigned to Post-Polynesian influence from Indonesia, noting particularly Dyak *njamok* and Macassar *njamo*; still there is Aneityum *inyum* of probably equivalent phonetic value and I can not trace Dyak raids so far to the south. In Alo Teqel the *n-t* mutation is a local idiosyncrasy.

In Indonesia we have no difficulty in identifying the Malay, Bugi, Dyak, and Macassar forms, but beyond that we shall find complications. Kayan *hamok*, Pampangas *yamuc* seem to be in accord with Tanna *kumug*. Malagasy *muka*, Tangoan Santo *moke*, and Malo *mohe* seem to form another group. The relation between the two groups seems to depend upon the assumption or loss of the prior syllable. Assuming a common stem in *mok* I have searched the Pacific material for some variant of that stem used in designation of an insect or other flying animal, but with no success. While I have twice grouped Melanesia with Indonesia in these obscurities it has been solely on the score of form resemblance; it will not have escaped notice that these are New Hebridean languages found much farther south than I have been ready to admit within the sphere of Dyak raiders.

Now what is the animal to which the *namu* designation pertains?

The mosquito and none other, say all our authorities save the Maori and the Marquesans, to whom it represents the sandfly and the gnat respectively. But is the mosquito indigenous to this wide area of the Malay seas and the Pacific?

This is a question for the biologist with his story of the migration of species. In certain parts of Polynesia the mosquito was long unknown. Read the historical record for Hawaii as set down by Prof. William DeWitt Alexander in "The Brief History of the Hawaiian People" page 195: "During this year (1826) mosquitos, hitherto unknown in the islands, were introduced at Lahaina by the ship Wellington from San Blas, Mexico." Seventy years later on the neighboring island of Hawaii I found them spread from the port of Hilo no greater distance than to Olaa, less than a score of miles. In Samoa we may not execrate the ship that brought the pest, but we have equally valid record of the introduction of this and yet another insect. In the manuscript of my "Samoa o le Vavau," awaiting its due season, I have preserved the tale of the king's daughter of Manu'a who stood on the shore gazing out into the east and into the face of her hero coming over the unknown seas to greet her. "I'll come back and marry you," he said, "and meanwhile keep my treasure safe against my return, but on no account open it." He gave her a tube of two joints of bamboo with their intervening septum and with the open ends of each cavity plugged. Pandora of the South Sea, from one end flew a swarm of flies, from the other a mist of mosquitos, and her hero never did come back.

It may be objected that these migrations could never have preserved the name when they no longer had reason to remember it in new lands whither

the mosquito had not penetrated. Then how shall the student of the Viti account for the possession there of *karavau* as a name for cattle in a land which knew no horned beasts until the missionaries came? It seems to be the *carabao* of the Philippines. Or how account for *ngeli*, the Viti name for monkey, when the nearest quadrumane is no nearer than Indonesia?

329.

nātē, nāsē, ātē, ātsē, the banana, the plantain (plant and fruit).

Samoa, Futuna, Niuē: *futi*, the banana. Tonga: *fuji*, the generic term for all bananas. Fotuna: *vuji*, the banana. Moiki, Nuguria, Nukuoro: *huti*, id. Maori: cf. *hutiwai*, a plant name (*Acena sanguisorba*). Aniwa: *hutshi*, the banana. Fila: *butsh*.

Viti: *vundi*, banana, plantain.

The following words all signify banana:

Fagani: *fuki*. Vaturanga, Nggela, Bugotu: *vundi*. Saa, Bululaha, Ulawa: *huti*. Wango: *hugi*. Maewo: *undi*. Sesake: *andi*. Baravon: *vundu*. Duke of York: *wundu*. Kalil: *'huddu*. Pala, Namatanái: *hūdu*. Lambell: *'hūn*. Laur: *hūn*. King: *wūn*. Lamassa: *wun*. New Ireland (Carteret Harbor): *un*. Epi, Bierian: *vihi*. Paama: *ahisi*. Malekula: *na-vis*. Malekula Uripiv: *na-vits*. Malekula Pangkumu: *ne-vij*. Arag: *ihi*. Malekula: *abus*. Eromanga: *no-bos*. Moánus: *mbūr*. Ambrym, Aneityum: *nohos*. Dobu: *udi*. Kiriwina: *usi*. Sariba: *udu*.

Ceram, Ahtiago: *phitim*. Matabello: *phūdi*. Ceram: *fudi*. Gah: *fúdia*. Tobo: *fūd*. Massaratty: *fúati*. Mayapo: *fūat*. Malagasy: *hutsi*, *untsi*. Timor: *hudi*. Caimarian: *u'ki*. Batak: *unchi*. Macassar: *unti*. Sambâwa: *punti*. Pangsanan: *ponti*. Sanguir: *busa*. Malay: *písang*.

Arabic: *muz'*, banana. Amharic: *muz*, id.

In Polynesia there are many names for banana and plantain and *futi* is the least usual; but its existence is well established, and Tonga *fuji* marks it as ancient, for generic terms are imperfectly developed in the intellectual plane of our islanders. Incidentally to the mention of Tonga *fuji* I must note that Codrington (Melanesian Languages, 55) has cited it incorrectly as *fugi* and treats the *g* as a *k* derivative; thereby he has unfortunately gone astray in so much of his discussion as is based thereon, for *t-j* is the common Tongan mutation before *e* and *i* (17 Journal of the Polynesian Society, 212).

Before taking up the Melanesian forms I cite, on the authority of Mr. Christian, these Micronesian affinities: Ponape *'ut*; Kusaie, Mortlocks, *'us*; Uluthi, *ut*; Palawat, Uleai, Lamotrek, Satawal, *uis*.

Nowhere in Melanesia do we find exactly the primal form *futi*. The nearest approximation is *huti* of Saa, Bululaha, and Ulawa. The mutation *t-g* is found only in this one instance in Wango, but *t-k* is not only well represented in our Melanesian material but is a presently active principle in Hawaii and Samoa; therefore we may associate *huti*, *hugi*, and *huki* as

futi forms. The *vundi* of Vaturanga, Nggela, and Bugotu, the same as *Viti*, is also *futi*. We have, therefore, a perfect identification of *futi* in the Solomon Islands, a series of crop colonies on the Samoa track. Baravon *vundu* is easily associable with *vundi* and therefore with *futi*, and Kalil 'huddu represents the same secondary stem with the *d* not reinforced. I have already commented on the borrowing at second hand of a reinforced consonant by speakers to whom a double consonant was objectionable and who, in their ignorance of the primal form, have ignorantly retained the reinforcement and have dropped the radical. Thus from *vundu* of Baravon and *wundu* of the Duke of York we pass to the 'hūn of Lambell, the hūn of Laur, the *wun* of Lamassa, and the *un* of Carteret Harbor in the Lamassa region of New Ireland. These form a second, a more remote, stage on the Samoa track; they lie within the eastern gateway.

We are next to examine a group of forms having *a* for the earlier vowel, *a* for *u*. These have all lost the initial consonant. Our studies in the eastern gateway have shown us the vanishing of *v* in progressive stages. Here we have no record of progress in the dilapidation, yet we may accept the result and view this group as representing an original *fati* variant of *futi*. We find this in Efaté *ātē*, Sesake *andi*; and Maewo *undi* may be taken as retaining somewhat of the transition phase which links *fati* and *futi*. Looking back at Efaté we find *ātsē*. This is no unusual *t*-variant. In Polynesia it is regular in Niuē and Tongarewa; in this stem we find a blunter form of it in Aniwa *hutshi* and Fila *butsh*. Then by reduction of the doubled consonant and selection of the wrong member we come to *āsē*.

We next find a group in which primal *futi* has become *fiti*. We do not find *fiti* itself any more than we found *fati*. But its immediately secondary phase is found in Malekula Pangkumu *ne-vij* and Uripiv *na-vits*. From *na-vits* we pass as before to *na-vis*, and thence it is a normal step in one direction to *vihi* which we find in Bierian of Epi, in the other to *hisi* which is preserved in Paama *ahisi*. Through *vihi* we are led simply to Arag *ihi*.

Paama *ahisi* has shown us a *futi* derivative assuming a prefixed *a*. We have already become acquainted with the change of *t* to *s*. Therefore we need have no hesitation in accepting Malekula *abus* as a *futi* derivative; still less in joining therewith Eromanga *no-bos*, for its *no-* is readily seen to be the Melanesian *n*-article chameleon-colored by the nearest radical vowel. Twice already have we seen the primal *f* develop into *h*; therefore the *no-hos* of Ambrym and Aneityum takes its place as a *futi* derivative. Moanus *mbūr* is the only form which for the present seems irreducible.

We find somewhat parallel variations in Indonesia. Primal *futi* is represented immediately by Ceram *fudi*, Matabello *phūdi*, Gah *fūdia*, Timor *hudi*, Malagasy *hutsi*, Tobo *fūd*, Caimarian *u'ki*, Malagasy *untsi*, Batak *unchi*, Macassar *unti*, Sambāwa *punti*, Pangasinan *ponti*. Sanguir *busa* introduces the *s* which we have twice already developed. Massaratty *fūati*, Mayapo *fūat* may represent the transition phase of *futi* to *fati*. The *fiti* form is seen in Ceram and Ahtiago *phitim*, and with the *s*-change may pass into Malay *pisang*.

We have passed in review many variants of the initial consonant of *futi*, *v*, *p*, *b*, *w*, *h*, and its complete vanishing. Not one case suggests the *m* which this Semitic requires to bring it into kinship.

niu, the coconut palm.

Samoa, Fakaafu, Tonga, Futuna, Niuē, Tahiti, Hawaii, Rarotonga, Manahiki, Tongarewa, Paumotu, Rapanui, Fotuna, Nukuoro, Nuguria, Moiki: *niu*, coconut. Mangareva: *niu*, the coconut palm when young, ripening into *nikau*. Maori: *niu*, a means of divination by sticks; *nikau*, a palm. Marquesas: *niu*, a top, a species of coconut. Mangaia: *nu*, the coconut palm. Viti: *niu*, the coconut palm. Rotumā: *niu*, id.

Sesake, Epi, Arag, Ulawa, Wango, Fagani, Saa, Bululaha, Vaturanga, Nggela, Bugotu, Motu, Kabadi, Pokau, Doura, Sinaugoro, Hula, Keapara, Galoma, Mugula, Suau, Sariba, Tubetube, Panaieti, Nada, Dobu, Port Moresby, Moanus, Solomon Islands, Lifu: *niu*, the coconut. Misima: *nihu*, id. Buka: *neu*, id. Alite: *liu*, id. Mukawa: *niura*, id. Awalama, Taupota: *neura*, id. Kwagila: *diura*, id. Kubiri, Kiviri: *rura*, id. Nengone, Nifilole: *nu*, id. Kiriwina: *nuia*, *luia*, id. New Caledonia: *ni*, id.

Malagasy: *nihu*, the coconut. Dyak: *nju*, id. Salibabo: *nyu*, id. Salayer: *nyórah*, id. Malay: *nior*, id. Liang: *nier*, id. Gah: *niūla*, id. Bicol: *niyog*, id. Cajeli, Mayapo, Massaratty, Amblaw: *niwi*, id. Morella: *niwil*, id. Lariko: *nimil*, id. Batumerah, Caimarian: *niweli*, id. Awaiya: *liweli*, id. Teluti: *nuelo*, id. Wahai: *luen*, id. Java: *nu*, id. Sulu: *nui*, id. Ahtiago: *nuim*, id. Tobo: *núa*, id. Malay: *nur*, id.

Arabic: *nah'lu*, *nah'ilu*, palms (general and collective respectively).

In Polynesia the only form variant is Mangaia *nu*, an unusual loss and to be met with again only in Nengone and Nifilole and in a part of Indonesia. In the Marquesas *niu* is not the usual name of the coconut, but it does occur and is recorded by Bishop Dordillon. The sense of top lies in the fact that the bud end of a coconut shell is used for spinning, both in the sport of children and as a means of applying to island life the practical side of the doctrine of chances. Thus it may be that in New Zealand, in latitudes higher than are grateful to the coconut, the divination sense has persisted even to different implements whereby the arbitrament of fate may be declared.

In Melanesia there is no deviation from sense and very few instances of form variation. Buka *neu* is a very slight variant. In Alite the *n-l* mutation is normal; thus *liu* is readily identified. The occurrence of *nu* has already been mentioned. Such internal loss is not regular in these languages. Furthermore the *ni* of New Caledonia leads us to infer that *niu* was anciently a composite in which *ni* carried at least some sort of generic sense, it being understood that this refers to those characteristics which might strike the islanders as indicating a genus. In composition with *kau* (301) tree we should then see *nikau*, the *ni*-tree, serving in Mangareva for the coconut palm, in New Zealand for the characteristic palm (*Areca sapida*) of that land, in Tahiti as *niau* for coconut leaf, and as *niau* in Hawaii for the leaf stalk of the coconut. The *ni*-form is found in Micronesia, and in the Marshall Islands *ni* is the coconut.

In Indonesia there is much form diversity, but we may distinguish two classes, those in *ni* and those in *nu*.

ni-class. The closest approximation to the classic *niu* is Salibabo *nyu* and Dyak *nju*, and Malagasy *nihu* comes next. From *nihu* we are led to infer that in the East Indies this *u* was scarcely felt to be a pure vowel; this naturally admits *w* as the semi-vowel form of *u*. Thereby we draw into accord Cajeli and development forms of *niwi*. We find now a group which picks up a final liquid, Malay *nior*, Liang *nier*, Morella *niwil*; and a new final vowel, Gah *niūla*, Salayer *nyórah*, Batumerah and Caimarian *niwéli*. Lariko *nimil* is so strangely remote from *niwil* as to avoid explanation. Awaiya *liweli* shows the *n-l* change already noted in Alite of Melanesia. Bicol *niyog* is the only instance of the assumption of a final palatal.

nu-class. This appears baldly in Java. Sulu *nui* is at least in form metathetic and if that be a permissible explanation *nu* becomes a secondary abrasion form. We have, however, no transition forms in Polynesia and Melanesia to point the way to the *nu*-forms in those areas. Tobo *núa* is a *nui* variant. The assumption of the final liquid converts *nu* into Malay *nur*, and *nui* into Teluti *nuelo*, Wahai being a metathetic *nuel* of the 4231 type. Ahtiago *nuim* is left without explanation.

The Semitic here proposed comes into closest resemblance with Teluti *nuelo*. This we have seen to be a secondary development of the *nu*-class, and that class we have seen to be anomalously removed from *niu*. Even *niu* itself we have been willing to suggest as an advanced phase of a primal *ni*. Thus the chances of Semitic affinity become very small indeed.

331.

ori, to rub, to grate, to make a creaking grating noise (as tree branches rubbing); **āri**, to plane, to scrape off, to rub off.

Samoa: *olo*, to rub down, to smooth, to grate. Tonga: *olo*, to rub, to brush, to scrub, to sharpen, to grind. Futuna: *olo*, *oloì*, to rub, to grate. Niuē: *olo*, to rub, to plane; *oloì*, to grind; *holo*, to rub. Uvea: *holoholo*, to rub. Hawaii: *olo*, to rub, to grate. Maori: *oro*, to grind, to sharpen on a stone. Tahiti: *oro*, to rub, to grate. Mangareva: *oro*, to rub, to whet, to sharpen; *ororo*, to rub, to chafe. Fotuna: *no-wurusi*, to plane, to shave; *no-soroa*, to grate.

Viti: *solota*, to rub, to grind, to grate; *thoronga*, a stone or coral on which cane is grated.

Motu: *oria*, to grate coconut; *uro*, a grindstone. Norbarbar: *heri-v*, to rub. Retan: *hara-v*, id. Mota: *sara-v*, id.

Malay: *urut*, to rub. Malagasy: *utra*, rubbed; *urina*, being rubbed.

Arabic: 'arata, 'arat'a, to rub. Syriac: *gra'*, to scrape off, to shave.

Hebrew: *gara'*, id.

It is impossible to consider this as wholly distinct from the stems gathered in item 205.

In that we have Samoa *solo*. From this the Samoan derives a transitive verb by the addition of the usual verb-formative. In abundance of cases in this assemblage of data we have seen that this verbal *i* has sufficed to protect and to preserve the final consonant of Proto-Samoan closed roots.

The fact that here when added to *solo* it gives us *soloi* is sufficient evidence that in *solo* we have to do with an open root. The open root is unmistakable in Motu *huria* and Aneityum *ruhoi*. Now as to Mota. Codrington dismisses the suffixes to verbs as certain consonants which make them transitive, but he offers no explanation of the principle which governs the choice of one consonant over another. Consistently I have found reason in these studies to regard them as the persistent final consonants of closed roots. Mota, then, yields the roots *sarag*, *sarav*, not proper kin of the open Polynesian *solo*. Viti is again a problem with *solota*. In general I have found it possible to treat these verbal terminations as indicative of root closure; therefore we may infer a root **solot**.

Taking up now item 331, we find Samoan *olo*, which we may faintly discern to be Proto-Samoan **holo**. That would give us **solo** and **holo** stems, differing slightly as would be expected in my theory of consonantal modulators. In Fotuna *no-soroa* would affiliate with *solo*. The other word, *no-wurusi*, we may link with Samoa *fufulu* (220). The Tonga *fulufuluhaa* points to a **fulus**-stem, and this Fotuna is in immediate accord therewith. Yet in item 220 we developed a **furun**-stem. Now Viti *thoronga* argues a Proto-Samoan stem of either **solong** or **holong**, and the latter is appreciably proximate to **furun**. The Mota *sarav*-stem already noted we here find continued to Norbarbar and Retan.

We have assembled the following stems: *solo*, *holo*, *fulus*, *fulun*, *sarag*, *sarav*. It is impossible as yet and in the scantiness of material to separate them.

The Malay and Malagasy might be adjusted if we could clear away the difficulties in the Pacific area.

The trilateron of the Semitic is **gr'**, and this is not identifiable with any of the stems here isolated.

332.

oro, to grunt, to growl, to snarl; **oro-maki**, to bark at; **bioro**, to make a confused murmuring noise, as a crowd of men all speaking at once; **orooro**, **uru**, **uruuru**, to growl, to grumble, to mutter, to murmur.

- (a) Samoa: *ngongolo*, a rushing sound, as of wind, waves or thunder. Tonga: *ngolo*, to snuffle, to speak through the nose; *taengolo*, to cough with a rattling hoarse sound; *kokolo*, a continuous rumbling noise. Futuna, Niuē: *tungolo*, to snore. Maori, *ngoro*, to snore, to utter exclamations of surprise or admiration. Mangareva: *ngoro*, to snore, to rattle in the throat; *ngongo*: the noise of phlegm in the throat; *ngoio*, to snore, to breathe through the nose; *tongoro*, the noise of water shaken in a bottle. Rapanui: *ngorongoro*, to grunt, to grumble, to snore, to sleep soundly. Paumotu: *ngooro*, *tagoro*, to snore. Hawaii: *nono*, to snore, to gurgle; *nonoo*, to snore; *nonolo*, to breathe hard, to snore, the sound of singing birds; *hoononolo*, to chirp, to coo, to growl, to grunt, to snort. Tahiti: *ooro*, to snore.

Viti: cf. *nggolou*, *nggonggolou*, to shout.

Mota: *ngora*, to grunt, to snort, to snore.

Malay: *ngorok*, to snore. Malagasy: *ngorodona*, the scuffling sound of many feet; *gogogogo*, screaming with pain.

- (b) Samoa: *tāngulu*, to snore, to emit a hollow sound. Tonga: *ngulu*, to make a grumbling, grunting, muttering noise; *ngungulu*, to groan, to roar; *fakangungulu*, to breathe hard; *fengului*, to mutter or murmur to one another; *tangulu*, to snore. Futuna: *ngūngūlu*, to grunt, to emit a deep tone, a grunt, a growl, the sound of rumbling thunder; *songulu*, to snore; *ūlū*, whistling of the wind, any great noise, rumbling of the bowels. Niue: *ngungulu*, to growl. Maori: *nguru*, to sigh, to grunt, to utter a suppressed groan, to rumble, to hum. Rarotonga: *ngurunguru*, to grunt, to cry out, to wail. Mangareva: *ngunguru*, a far-off noise, a heavy noise as of many voices; *ngurunguru*, to murmur, to grunt, to stammer, to speak through the teeth. Paumotu: *ngurunguru*, to gasp, to moan, to sigh, to breathe. Hawaii: *nunulu*, to grunt, to growl, to sound as the singing of birds, to chirp, to warble. Tahiti: *uuru*, to groan, to grunt. Fotuna: *tangurunguru*, thunder.

Viti: *kuru*, to thunder; *ngguru*, to scranch; *langguru*, to make a scranching sound.

Nggela: *ngurunguru*, to roar. Motu: *uru*, deep groaning, stertorous breathing. Duke of York: *pakpakuru*, thunder.

Malay: *guruh, guroh*, thunder; *ngaluh*, to sigh; *nguru*, to sigh, to groan, to rumble; *kurkur*, to grunt. Ilocan: *gurruud*, a thunderclap.

- (c) Samoa: *ngu*, to growl, to make a murmuring noise as distant voices; *ngungu*, *pa'angungu*, to scranch; *mangungu*, to be scranched, to make a grinding noise as when walking over gravel; *fenguingui*, to talk in a low tone. Tonga: *ngu*, to grunt; *fakangungu*, to grumble, to mutter. Futuna: *nguū*, to grunt, to groan. Niue: *ngu*, to moan, to grunt, to roar; *ngūngū*, to scranch; *fengui*, to murmur. Mangaia: *mangungu*, thunder. Hawaii: *nu*, to groan, to roar as wind, to grunt; *nunu*, a moaning, grunting, groaning, a dove. Fotuna: *noh-ngu*, to grunt, to groan. Rapanui: *henguhengu*, to murmur; *henguingui*, to read.

- (d) Maori: *ngara*, to snarl.

Nggela: *ngangaraha*, to scream.

Macassar: *ngangara*, to shriek; *gagara*, to speak roughly.

- (e) Maori: *ngerengere*, to growl. Mangareva: *ngere*, a loud confused noise.

Viti: *ngengele*, to sing.

- (f) Maori: *ngeringeri*, to growl. Samoa: *ngingili*, to have a good voice for singing or speaking.

Nggela: *ngingili*, shouting.

Arabic: *nah'ara*, to grunt; *h'ara*, to low; *h'arh'ara*, snort, snore; *harra*, to growl, to snarl; *harharat*, murmur or sound of copiously flowing water.

We have assembled here a number of stems which have a common element in form, *ng-l*, and in sense are united by the fact that they designate things audible, almost wholly vocal noises, and uniformly they deal with the inarticulate sounds. With the *ng-l* forms I have associated *ngu*, which seems to be yet more elemental and to represent in itself a common factor.

The *ng-l* forms vary in the vowel used, as follows: *ngolo*, *ngulu*, *ngala*, *ngele*, *ngili*.

It is noted that the special form *tangulu* has already been examined in item 248 and will be here omitted.

ngolo. It is only in Samoa *ngongolo* that we find this stem to deal with sounds other than animal; in this language the common *ngolo* sense is carried by 'o'olo of the stem **kolo** which is readily associable with this group. Samoa 'o'olo, according to Pratt in one of his naïf definitions, is "to have a voice like a hen, to speak indistinctly." Uvea *kokolo* is to murmur. But Tonga *kokolo* passes from the human sound to that in exterior nature which the Samoan expresses by *ngolo*; it signifies a continuous rumbling noise. In Futuna *kokolo* is the grumbling of the bowels, echo, dull noise; sound of water when bubbling or flowing or falling; the sough of the wind in the leaves of the ironwood. If Samoan *ngongolo* deviates from the general sense of an animal noise it comes back to the norm in its derivative *fa'angongolo* to curse, to utter a malediction, and this seems to err as far in the other direction, for such curses as come to most of us depend for their accuracy of impact upon their clear articulation. We find the same suggestion of articulation in the second sense of Maori *ngoro*. In Tonga *taengolo* the former element is *tac*, an alternative of *tale* to cough. In Mangareva and Hawaii the forms lacking the liquid we postpone for consideration with the *ngu*-stem. The Viti *nggolou* is set here for comparison; *ngg* is the equivalent of Proto-Samoan *k*, not of *ng*; the sense is not exactly in agreement with *ngolo* or *kolo*. Mota *ngora*, despite vowel change in the unaccented final syllable, is clearly of this kin. Here too we note for inclusion Efaté forms of *oro*; *oromaki* suggests a stem closure in *m* which is not elsewhere identified.

ngulu. As we have seen *ngolo* paralleled with *kolo*, so this stem has its *k*-form *kulu*. That is found in Futuna *ùulu* and probably in Samoa *fa'a'ulu'ulu* (which Pratt records as *fa'auluulu*) to cry out, to shout either from pain or fear; in Tonga *uulu* the sound of anything in motion, and in Viti *kuru*. The basic signification of *ngulu* and *kulu* is the deep, confused inarticulate sound, principally animal but capable of extension to outside nature. In Hawaii, the northern limit of migration, *ngolo* and *ngulu* have lost enough of the gruff sense to admit of the inclusion of the note of birds, inarticulate but light and cheerful. With this belongs Efaté *uru*.

ngala. This stem is of infrequent occurrence, but we have one excellent identification in each of the three island areas, and the Macassar *gagara* proves that for it also there exists a *k*-form.

ngele. This must not be dissociated from *ngili*. This stem we identify in Polynesia, in Viti, and in Melanesia.

ngu. This involves as well the stem *ngo*. The latter is found in Mangareva *ngongo* and *ngoio*, in Hawaii *nono* and *nonoo*; these are in the sense of snoring or the rattling of phlegm, senses quite cognate with those we find for *ngu*. This covers all the dull and deep inarticulate sounds from the snore to the peal of thunder. I regard this stem as that which primarily contains the idea of inarticulate sound. The compounds with a *lo*-form do not express specific differences. I therefore regard them as determinant compounds, each member having *inter alia* one common signification, the compound emphasizing that sense and restricting the meaning to it.

Of the Semitic here offered the stem is *hr*. Of our Polynesian we have seen that *ng* is a sufficient stem. The Semitic is not in accord therewith, and if that difficulty could be obviated it looks toward the later development and not toward the primordial *ngo*.

333.

rā, trā, tā, nrā, blood; *mitā*, to bleed.

Samoa, Fakaafu, Nukuoro, Tonga, Futuna, Niuē, Uvea, Aniwa, Fotuna, Nuguria, Sikayana, Vaté, Maori, Tahiti, Marquesas, Rapanui, Mangareva, Rarotonga, Manahiki: *totō*, blood. Puumotu: *putotoi*, bloody. Bukabuka: *kura toto*, dark red. Hawaii: *koko*, blood.

Viti: *ndra*, blood. Rotumā: *tot*, id.

The following signify blood:

Sesake: *nda*. Makura: *na-dah*. Motlav, Volow, Norbarbar, Gog, Merlav, Vuras: *ndar*. Arag: *daga*. Lo: *ndara*. Lakon: *dara*. Mosin: *nar*. Mota: *nara*. Pak, Sasar, Alo Teqel: *tar*. Tanna: *neta*. Nengone: *dra*. Lifu: *mondra*. Pala, Eromanga: *de*. Laur: *dä*. New Caledonia: *'nte*. Maewo: *ndai, ndei*. Omba: *ndai, ndrai*. Malo: *dai*. Marina: *tsae*. Tangoan Santo: *rai*. Motu: *rara*. Sinaugoro, Nala: *lala*.

Java, Malagasy: *ra*. Salayer: *rara*. Malay: *darah*. Matabello, Teor: *larah*. Saparua, Awaiya: *lalah*. Cajeli, Liang, Morella, Lariko, Caimarian: *lala*. Batumerah, Gah: *lalai*. Teluti: *laia*. Tobo: *lawā*. Mayapo, Massaratty: *raha*. Baju: *lahah*. Ahtiago: *lahim*. Wahai: *lasin*. Menado, Sanguir: *daha*. Bouton: *orah*.

Arabic: *dam'*, blood; *damiya*, to bleed. Hebrew: *dam*, blood.

Ethiopic: *dam*, id. Syriac: *dem*, id.

The Melanesian stem is evidently *ta*. I find it impossible to bring this into accord with the Polynesian *toto*. There is at no point a vestige of a transition form from *a* to *o*. On this point I cite Mr. Codrington's note (Melanesian Languages, 59):

The Polynesian word for blood is *toto*, which does not appear in the Malay Archipelago at all, and in the Melanesian Vocabulary only as *tot* in Rotumā, where it is probably an importation. But *toto* is used in Melanesia, and in such a way as to show that it is at home there and can not possibly be an importation from Polynesia. In San Cristoval *toto* is congealed blood; in Florida the disease hæmaturia is *mimi-toto*; and though it is not unreasonable to maintain that *toto* may have been borrowed in those parts, it would be very hard to conjecture how it had been done. But *toto* in the Banks Islands is a poisoned arrow, and this can be shown to be the same word. The arrow is called after the tree with the viscous sap of which it has been smeared, and the tree has its name from the abundance of its sap, in Mota *totoai*, in a dialect of Fiji *dotoa*. The sap of a tree is its blood, and it is very easy to conceive a word at one time more general in its meaning being particularized to signify in one set of languages blood and in another sap. It assists this view to observe that *toto* in San Cristoval is clotted thick blood, like the thick sap *totoa*.

In Efaté we have *ta* and *ra* (*tra* and *nra* being *ra*-variants).

Viti *ndra* argues a parent in uvular *r*, but this does not appear in Polynesia at all. A mere glance at the chart will show that in our Melanesian

identifications of the *ra*-stem we have Viti at the hither end and Motu at the yonder end and that the intervening area lies altogether from the northern New Hebrides southward. The only exception to that is Laur *dā* on the New Ireland coast. Omitting Laur, these three points mark out the southern migration, that to which I have assigned the designation of the Viti stream. The Melanesian occurrences of *toto* as presented in the foregoing note almost wholly lie along the Samoa stream.

Similarly when we prick the Indonesian identifications upon the chart we find them to lie nearest the southern gateway.

The Semitic proposed stems in **dm**. The latter is not found at all in the Melanesian; and the former is not the radical *r*, not even a regular *r-d* mutation, but the resultant of a second loan acting in a manner that has already been sufficiently explained. There is, therefore, no reason to accept this as an affinity.

334.

ran, water.

Samoa: *lanu*, liquor amnii, to wash off salt water (*ja'alanu*). Tonga:

lanu, *fakalanu*, to wash off salt water with fresh. Futuna:

lanu, liquor amnii, to rinse off salt water with fresh (*fakalanu*).

Niue: *fakalanu*, to wash in fresh, after bathing in salt, water.

Mangareva: *ranu*, saliva, globules of foam.

Viti: *ndranu*, fresh (of water), to wash in fresh water after having bathed in salt.

Motu: *ranu*, water. Galoma: *nalu*, id. Sinaugoro, Hula, Keapara, Rubi: *nanu*, id. Tanna: *rani*, fresh (water).

Malagasy: *rano*, water; *lano*, swimming. Java: *ranu*, water. Kawi: *ranu*, *danu*, id. Ilocan: *danum*, id. Malay: *danau*, the ocean.

Arabic: *rahalu*, water (of a kind).

Here we have one of the rare instances in which a Nuclear Polynesian vocable reappears in Mangareva, although the sense is highly modified. The word has been carried along the Viti stream, and in Torres Straits we have several stations.

In Nuclear Polynesia the sense is specialized, the waters of birth being recorded in Samoa and Futuna, and in every case the word refers to the rinsing off of sea water. To wash away the salt water is not only for appearance sake in the tropical Pacific. The sea has a high degree of salinity and the salt crystals are not only the clearly visible signs of an unkempt habit when they glisten upon the brown skins, but they are uncomfortable as well. This use stamps upon *lanu* a sense in which the fact that it is fresh water is more prominent than the water sense.

While the Kawi has both *ranu* and *danu* the extension of the latter in Malay *danau* to the ocean signification estops us from considering *ranu* and *danu* as variants; they seem more likely to be differentiated in meaning and form.

The Arabic *rahalu*, **rhl**, presents no close resemblance to an **rn** stem such as we have in our island areas.

335.

rau, leaves (for food to be cooked, and for putting food on, as on a plate, when cooked).

Samoa: *lau*, a leaf; *lalanu*, to be in leaf; *laulau*, a food tray plaited from a coconut leaf, to set out food on such a tray or on a table. Tonga: *lau*, *lou*, a leaf; *laulau*, a tray. Futuna, Uvea, Nuguria: *lau*, a leaf. Niuē: *lau*, a leaf; *laulau*, a table. Hawaii: *lau*, a leaf; *laulau*, the netting in which food is carried. Maori, Tahiti, Rarotonga, Rapanui, Paumotu, Nukuoro, Fotuna: *rau*, a leaf. Mangareva: *rau*, *rou*, id. Marquesas: *au*, *ou*, id.

Viti: *ndrau*, a leaf; *rau*, thatch, coconut leaves shaken in the water to drive fish into the net. Rotumā: *rau*, a leaf.

Sesake, Sinaugoro, Hula, Keapara, Galoma: *lau*, a leaf. Makura: *lau*, a plant. Moānus: *laūn*- (always composite), a leaf. Marina, Arag, Vaturanga, Nggela, Motu, Waima: *rau*, id. Natalava: *tharau*, id. Aneityum: *in-rau*, a covering, a preparing of food for a feast; *in-raurau*, coconut leaves for a net. Malo, Roro, Kabadi: *rauna*, a leaf. Wango: *raua*, id. Mukawa: *raurau*, id. Vaturanga: *rarau*, id. Malekula: *raun*, id. Lakon: *drawi*, id. Mota: *nau*, id. Maewo: *ndoui*. Merlav, Vuras: *ndoi*. Lo: *hoi*. Vuras, Gog: *ndo*. Duke of York: *dono*. Mosin: *no*. Mota: *nau*, *no*, id. Mekeo: *ngangaunga*, id. Motlav: *ron*. Volow: *raren*, *ro*. Nengone: *ru*. Deni: *leu*. Guadalcanar: *talū*. Omba: *raugi*. Norbarbar: *ndugi*. Pak, Sasar, Alo Teqel: *togi*.

Savu: *rau*, a leaf. Java: *rou*, id. Malagasy: *ravina*, id. Saparua: *laun*, id. Baliyon, Baju: *daun*, id. Malay: *daun*, *dawun*, id. Sulu: *dahun*, id.

Arabic: *hadab'*, branches, leaves; *hadiba*, *hadaba*, to pluck, to have long eyelashes, to have long branches.

In Efaté *rau* does not have the simple leaf sense, but the meaning of leaf tray is found in Samoa, Tonga and Niuē of Nuclear Polynesia, and in Hawaii. Here it is accompanied with the meaning of leaf, and that is the only signification in the Tongafiti languages. That Hawaii *laulau*, if not the food mat, is at least different from leaf and has to do with food is to be attributed to that direct voyage from Nuclear Polynesia for which we have gathered so many pieces of evidence. That Futuna and Uvea, though geographically in Nuclear Polynesia, have not the food-tray signification is a point to be considered with other evidence as tending to show that the settlement of these two islands in such close proximity was principally Tongafiti.

The Samoan *lalanu* by its preduplication shows *lau* to be considered a composite, *la-u*. The latter member we may not presume to identify, but the former has a suggestive resemblance to *la*, *lala*, a branch, also a botanical term. We note in Tonga, Mangareva, and the Marquesas alternative forms with the vowel *o*. The fact of two forms in Viti of different sense points to two distinct sources. The *ndrau* leaf is derived from a stem *rau* having the *r* grasseyé; *rau* is derived from *rau* of the lighter *r*. This suggests that

in Proto-Samoan the two forms were distinct, a distinction which in the later weakening of the liquid it has been found impossible to preserve. Thus may we account for the occurrence of the food-tray sense in Efaté and Aneityum without the leaf signification. It will be observed that Aneityum has the fishing sense found in Viti, which further is found in Samoa *lau loa* a surround of coconut leaves, and in Tongarewa *raurau* driving fish with coconut leaves.

In Melanesia *rau* a leaf is found somewhat widely: Sesake, Motu, Marina, Arag, Vaturanga, Nggela; Omba *raugi* is the same with a formative suffix. Makura is only slightly removed in signification. Natalava *tharau* is a *rau*-composite, as is Wango *raua*. Vaturanga *rarau* is in form a parallel of Samoa *lalau*. Moánuš and Malekula *laun* and Malo *rauna* introduce the Indonesian final *n*; Moánuš we might ascribe to that influence; Malo and Malekula lie beyond its reach. This *n*, therefore, may represent a persistent radical *n*-closure.

We are next to examine a group of forms with *i*-final, all New Hebridean. This *i* is a suffix to noun stems when they are used absolutely. Of the *a*-series we have Lakon *drawi* preserving the *r* grasseyé by a preface as in Viti, Mota *nau i nau*. Of the *o*-series we have Maewo *ndoui*; Merlav, Vuras, *ndoi*; Gog, Vuras, *ndo*; Mosin, Mota, *no*. These two series introduce that *r*-*nd*-*n*-*d* mutation which we find it so hard to comprehend. Pak *to-gi* is a direct derivative from Vuras *ndo*. Still on the *o*-series we have Duke of York *dono* and Motlav *ron*, both with the *n*. Volow *ro*, and Nengone *ru*, Guadalcanar *ta-lu* (suggesting Natalava *tha-lau*) and Norbarbar *ndu-gi* belong in this series with still a further vowel change. Deni *leu* is probably a form of *lau*, but unique. A still different mutation, *r*-*h*, is needed to account for Lo *ho-i*, also unique.

In Indonesia we find *rau*, *rou*, *laun* and *daun*, all occurring in Melanesia; and Malagasy *ravina* is very close to Lakon *drawi*.

The Semitic here proposed is represented without variation by the triliteral **hdb**, which can have no relation with our island composite *la-u* or *la-un*.

336.

rongo, rong i, tongi (dongi), nrong, tong i, to hear, to obey, to feel, to know; **marongo, matrongo, manrong**, to be idle, to amuse oneself at the expense of someone.

Samoa: *longo*, to hear, to feel, to report, a sound; *longona*, to hear; *langona*, to understand, to feel, to perceive by the senses; *fa'alongo*, to hear, to obey. Fakaafo: *fakalongo*, to hear. Futuna: *longo*, a report, tidings, to perceive, to feel. Niue: *longona*, to hear, to perceive by the senses, to understand, to smell; *langona*, to hear; *ongo*, a report. Uvea: *longo*, to hear, to perceive, to feel, to comprehend, a message, a report; *fakalongo*, to obey. Nukuoro: *longo*, to hear; *longo mai*, to obey. Rarotonga: *akalongo*, to hear. Hawaii: *lono*, to hear, a report; *hoolono*, to listen, to regard. Nuguria: *ulono*, to hear. Maori: *rongo*, to hear, to feel, to smell, to taste, to obey, tidings, report, fame, sound, noise. Mangaia: *rongo*, a report; *akarongo*, to listen. Mangareva: *rongo*, to hear, to listen, to understand,

- to know, to apprehend. Aniwa: *fakarongo*, to hear. Fotuna: *no-rongona*, to hear. Paumotu: *rongo*, to hear; *fakarongo*, to cause to believe. Rapanui: *rongo*, to hear, to believe, to comprehend, to understand; *hakarongo*, attention, to adhere, to hear, to comprehend, to understand. Tonga: *ongo*, to hear, to feel; *ongoongo*, to report; *fakaongo*, to hearken, to await commands; *longona*, to inform, to report. Marquesas: *ono*, *oko*, to listen, to understand; *hakaono*, to listen.
- Viti: *rongo*, to hear, to be heard, to sound, a report, tidings; *vaka-rorongo*, to listen, to obey.
- New Britain: *logor*, to hear, to report. Lambell: *longor*, to hear. King: *longoró*, id. Duke of York: *longoro*, id. Baravon: *walongore*, id. Raluana: *walongore*, *walawalongor*, id. Bierian: *mlongo*, id. Mekeo: *longo*, to hear, to know. Tagula: *ilongwe*, to hear; *kau-lungwe*, to know. Nguna, Arag, Sesake: *rongo*, to hear. Maewo: *rongo*, to believe. Omba: *rongo*, to feel any sensation. Vaturanga: *rongo*, to feel a sensation. Malo: *rongo*, to hear. Nggela: *rongorongorongo*, news; *vaovarongo*, the hearers; *rongovia*, to hear. Vaturanga: *rongovia*, *rongomi*, to hear, to listen to. Mukawa: *nonora*, to hear, to know. Tavara, Wedau: *nonori*, id. Awalama, Taupota: *nonori*, to hear. Oiun: *nowara*, id. Raqa: *anoara*, id. Kabadi: *oonova*, id. Roro: *ona*, id. Uni: *abai-oa*, id. Nggao: *rongi*, to understand. Volow: *rong*, to hear. Sesake: *ndongo*, to smell. Omba: *ronghogosi*, to listen; *rorongtagi*, to hear a sound. Arag: *rorongtai*, to listen to. Marina, Mota: *rogotag*, to hear. Gog: *rongtag*, id. Ambrym, Retan: *rongta*, to hear, to feel. Motlav, Vuras: *rongteg*, to hear. Mosin: *rongte*, id. Norbarbar: *rongte*, to feel. Lo: *rongte*, to hear, to feel. Santo: *ronoa*, to hear. Maewo: *roro*, *roroi*, *rore*, a report. Mota: *roro-i*, a report; *ronga*, famous; *rongo*, to apprehend by the senses, to feel, hear, smell, taste. Baki: *mjongi*, to hear.
- Java: *rungu*, to hear. Matu: *langan*, sound, noise. Malay: *dangar*, to hear. Malagasy: *rohona*, a sound, as of thunder.
- Arabic: *'adina*, to hear, to know, to feel the smell of, to cause to hear, to make known. Hebrew: *'azan*, *he'zin*, to hear, to listen, to obey.

In the Polynesian at least three senses are entangled in the stem *longo*, to hear, a thing heard, and to preserve silence. The latter, *fa'alolongo*, falls easily into place, for it is a composite with the *fa'a* of comparison, to be as one listening, therefore to be silent, "be silent that ye may hear." We find at least two Polynesian closed stems, **longon** of the sense perception and **longos** of the production of a sound that may be heard. The latter seems to appear in the Viti *rongotha* but with the **longon** sense to hear, the former in Tonga *longona* but with the **longos** sense to report. Beyond these two inverted instances the closed stems have left no definite record.

In the examination of this material we shall confine ourselves to so much thereof as finds identification in our Melanesian records, namely, the matter of sense perception.

In item 324 we have discussed the stem *mata* the eye and the sense of sight. This *longo* seems to serve for the other sense. This we shall examine in general and in particular.

- (1) *Sense perception in general*: Samoa, Futuna, Niuē, Uvea, Maori, Mangareva, Tonga, Marquesas; Efaté, Omba, Vaturanga, Nggao, Ambrym, Retan, Norbarbar, Lo, Mota.
- (2) *To hear*: Samoa, Fakaafo, Niuē, Uvea, Nukuoro, Rarotonga, Hawaii, Maori, Mangaia, Mangareva, Aniwa, Fotuna, Paumotu, Tonga, Marquesas, Viti; Efaté, New Britain, Lambell, King, Duke of York, Baravon, Raluana, Bierian, Nguna, Arag, Sesake, Malo, Nggela, Vaturanga, Volow, Omba, Marina, Mota, Gog, Ambrym, Retan, Motlav, Vuras, Mosin, Lo, Santo, Baki; Java, Malay.
- (3) *To smell*: Niuē, Maori; Sesake, Mota.
- (4) *To taste*: Maori; Mota.
- (5) *To feel*: Maori; Mota.

The last three deserve a little closer inspection.

(3) *To smell*. Niuē: *longona*, to smell; *hongī*, to smell. The latter is external; it is the sniff with which the odor-emanations are welcomed to the olfactory nerve-endings; the apperception rests in *longona*. Maori: *rongo*, to smell; *hongī*, to smell; *whakamono*, to smell. *Whakamono* is to sniff, to sniff up, to smell, and probably in reference to a nauseous odor, for *monomono* means unpleasant to the smell. It also is external; the apperception rests in *rongo*. Mota: *rongo*, to smell; *punpun*, to smell; *soman*, to smell. *Punpun* in sense is the Mota equivalent of Polynesian *songi* as found in the Niuē and Maori preceding, this shown in the fact that it means to sniff in general and in particular designates the salutation roughly called rubbing noses. *Soman* means to put the nose to. These two, therefore, are external; the apperception rests in *rongo*.

(4) *To taste*. Maori: *rongo*, to taste; *wharakai*, to taste. We have only the definition of the latter and are without information as to the extent and manner of its use. Mota: *rongo*, to taste; *nam*, *namis*, to taste. The latter is physical; it means to touch with the tongue; it is external; the apperception rests in *rongo*. If *rongo* in Maori and Mota had not such a catholic applicability to all sense perception except sight we should find an interesting text in the fact that these savage people had arrived at a comprehension of the intimate association of taste and smell which has not become at all commonly familiar to persons of far wider range of information.

(5) *To feel*. In the extreme brevity of our vocabularies no attempt has been made to note the distinction between feel in its tactile sense and the broader signification of perception in general. We are therefore not justified in attempting a differentiation not warranted by our authorities.

The following general conclusions seem well supported by the facts of this record.

At a period but narrowly anterior to the Tongafiti or later migration the psychology of the Polynesian recognized two sense perceptions, the sense of sight and the other sense. When this other sense began to differentiate in the direction of the knowledge of the sense perceptions which our own

race has so long possessed that only recently they were classed as instincts, it was the sense of hearing which first came up for particular designation. I am somewhat in doubt as to this statement; it is hard to comprehend the psychology of conditions so different from our own. The same material might equally bear the interpretation that the other sense was most commonly understood as that of hearing.

In a psychology of which the sense perception is at no higher specialization than sight and the other sense it will not surprise us to discover that the sense of touch has not yet been isolated from the merely mechanical pressure of the skin upon an exterior object. I do not say that tactile sense is as yet unrecognized, but I will let the vocabulary tell its own story in a few of the better-known Polynesian languages.

Samoa: *tangotango*, to feel; it is used in the sense to take hold of, therefore it means no more than to have in the hands or to have the hands upon.

Tonga: *ala, alafi*, to feel; its particular use is to touch, to feel after with the hand.

Viti: *yamotha*, to feel; to feel for with the hand, to run the hand over.

Maori: *whawha*, to feel; to handle, to grasp.

Hawaii: *haha*, to feel; to move the hand over a thing.

These are representative of the central and of the distal languages of Polynesia and they represent varying culture planes. It is clear that in not one of them does the sense of feeling exist independently of the physical impact which constitutes the touching.

In the matter of form the Polynesian variations of *longo* are strictly according to rule, except that in Samoa and Niuē a *longona* form is introduced, not found elsewhere until we reach Indonesia.

In the eastern gateway we find an extended form *longoro*, which may be found again in Malay *dangar*. In the New Hebrides the termination which varies from *tagi* to *te* is verb-formative. The Omba *ronghogosi* may best be understood as a composite. In Nggela and Vaturanga we have *rongovia*, and in Vaturanga *rongomia*, consonant forms which agree neither with the forms in the eastern gateway nor with those found in Nuclear Polynesia.

In Indonesia Java *runqu* is a satisfactory identification; the Malay is far less sure. Matu *langan* is in good form accord with Nuclear Polynesian *langona*, but the sense is not so clearly of kin. The Malagasy *rohona* interjects a syllable for which we have no means of accounting.

The skeleton of the Semitic is 'dn, 'zn, with which it is impossible to establish our Polynesian *longo* in any sort of accord.

sā, to be bad, evil.

Samoa: *isā*, an expletive of disapproval. Tonga: *sa*, an expression of disgust and disapproval; *isa*, to hiss, to disapprove. Futuna: *saā*, indecent, improper; *isa*, exclamation of indignation. Fotuna: *sa*, bad.

Viti: *tha*, bad; *isa*, interjection of disapprobation. Rotumā: *raksa*, bad.

Sesake, Lakon: *sa*, bad. Pak, Leon, Sasar: *se*, id. Alo Teqel: *see*, id. Malo, Eromanga: *sat*, id. Norbarbar: *set*, id. Motlav: *het*, id. Volow: *heat*, id. Aneityum: *has*, id. Merlav: *sasat*, id. Mota: *tatas*, id. Maewo: *seseta*, id. Wango, Alite: *taa*, id. Tanna: *ra*, id. Savo: *isarongo*, id. Malay: *jahat*, bad. Malagasy: *ratsi*, id. Arabic: *sa'*, *sawat*, to be bad, evil.

Although all our identifications of *sa* in Nuclear Polynesia are interjections they seem quite satisfactory.

In Viti we find the word in two forms. It would appear that *isa* is a more modern appropriation of the word, for exclamations in any language travel far and travel true. This will not be doubted by such as have had occasion to welcome as an old friend in the most distant surroundings our own truly Athanasian contribution to the vocabulary of the world's objurgation. The Rotumā *raksa*, like so much in that odd speech, remains for the present inexplicable, but it is safe to identify the *sa*.

In Melanesia we find that the Proto-Samoan stem was **sat**. The abraded form is found in Efaté, Sesake, Leon, Lakon, Pak, Sasar, Alo Teqel. Malo, Eromanga, and Norbarbar retain the stem form. Motlav *het* is an easy variant of Norbarbar *set*. Volow *heat* is *hat* with the vowel interpolation customary in that language. Aneityum is easily deducible as *hat* with the *t-s* mutation. Merlav *sasat* and Maewo *seseta* are preduplications of *sat* and *set*. Mota *tatas* is therefore metathetic. Savo *isarongo* is probably an *isa*-composite. Wango and Alite *taa* is hard to adjust; the fact that in each language an inner *t* is frequently excised might warrant us in suggesting *tata*, but even though that has some resemblance to Mota *tatas* it fails to be convincing. On the possibility of *s-r* mutation in Tanna *ra* see note 239.

Malay *jahat* will pass muster as a *hat*-composite. Malagasy *ratsi* can not be accepted without more evidence.

The Semitic is certainly a resemblance.

338.

saki, to ascend, to go up; **sakesake**, to be up, to sit upon.

Samoa: *a'e*, upward, to go up; *sa'e*, to elevate one leg, as in the act of falling in a club match; *'a'e*, to ascend, to rise. Tonga: *hake*, upward, to ascend. Futuna: *ake*, up, to ascend; *sake*, to raise the leg at one in derision or mockery; *kake*, to climb, to ascend. Niuē: *hake*, up, to go up. Uvea: *ake*, up; *hake*, to go up. Maori: *ake*, upward; *kake*, to climb, to ascend. Marquesas: *ake*, on high, upward; *kake*, to ascend. Mangareva: *ake*, upward. Bukabuka: *ake*, up. Tahiti: *ae*, up, to go up, to ascend, to climb. Hawaii: *ae*, to raise, to lift up, to mount. Fotuna: *no-jikijiake*, to lift up; *no-tukake*, to stand upright. Nukuoro: *kake*, to go up. Nuguria: *kake*, up; *hanage*, northwest. Rapanui: *kake a*, to go aboard.

Viti: *thake*, upward; *thaketa*, to dig or lift up.

Sesake, Tangoan Santo, Nguna: *sake*, up. Malo: *sace*, up. Vaturanga: *sake*, id.; *sahelia*, to go up into it. Mota, Merlav: *sage*, up. Omba: *hage*, id. Nggela: *hage*, to go up; *hagelia*, *hagevia*, to embark. Bugotu: *hage*, up; *hagelia*, to go up on

a ship. Belaga: *hage*, to enter; *hagelia*, to embark. Gog:
sag, up. Norbarbar: *hag*, id. Eromanga: *sah*, id. Volow:
ha, id. Saa: *ta'e*, landwards. Motu: *dae*, up. Wedau:
g'ae, id. Sinaugoro: *rage*, id. Keakalo: *agi*, id.
 Malay: *daki*, up. Malagasy: *akatra*, ascended, gone up.
 Hebrew: *nasak*, up, to go up. Aramaic: *nsak*, *sak*, id.

By combining various elements in the material here assembled it is seen that the Proto-Samoan has three stems, **ake**, **sake**, **kake**. Regarding *ake* as the primitive stem the others devolve naturally therefrom in variant significations conditioned by the prefixation of consonantal modulants. The primal *ake* is evidenced by its existence in Futuna along with *sake*, and in Uvea with *hake*. *Sake* is restricted to the Proto-Samoan migration; it is by no means clear whether it was originally *hake* or *sake*, for in that early stage there seems to have been little distinction between aspiration and sibilant; the employment of *hake* in Uvea (which has both *h* and *s*) inclines for so much weight as it may possess toward *hake* over *sake*. From the fact that *kake* is confined to Nuclear Polynesia and the Tongafiti area it is evident that it was carried by the later migration; it appears nowhere in Melanesia. In the Solomon Islands *hagelia* (Nggela, Bugotu, Vaturanga, Belaga), and *hagevia* (Nggela) suggest closed stems **sakel**, **sakev**, of which no further trace exists.

Our Melanesian forms all derive from the *sake* stem and very few call for comment. Volow *ha* is doubtful for the reason that we have no record of the dropping of *g* in that language; while the form seems akin to Norbarbar *hag*, there is not a single instance here of a terminal abrasion from an open stem to other than a consonant closure. Saa *ta'e* is readily brought into line, for *k* is commonly elided in that speech, and the *s-t* mutation is seen again in the next item; the sense is quite comprehensible, for every landward direction in Malanta is upward, and Mota *sage* makes this inland sense plain as defined by Codrington "to go inland towards the inner upper part of the country," but generally *a'e* means to windward.

The Indonesian identifications are too slight to have any particular value.

One of the Semitic forms bears a close resemblance to *sake*, but this amounts to little if we may look back to a primal *sakel*.

339.

sela, road, path, landing place of a canoe.

Nukuoro: *sailenga*, *ala*, a road, a path. Tonga, Niuē: *hala*, id.
 Samoa, Futuna, Uvea, Hawaii: *ala*, id. Nuguria: *hara*, id.
 Maori, Tahiti, Mangaia, Rapanui, Mangareva: *ara*, id. Pau-
 motu: *eara*, id. Marquesas: *aa-nui*, the highway.

Viti: *sala*, a path, road. Rotumā: *sala*, id.

Mota, Malo: *sala*, road, path. Deni: *hala*, id. Saa: *tala*, id.
 Taupota: *talaka*, id. Awalama: *talaha*, id. Tavarā: *taeaha*, id.
 Roro: *tai-ara*, id. Motu: *ariara*, a road through a village;
dara, a road through forest. Uni, Pokau: *dala*, road. Wango:
tara, a road. Belaga: *thalautu*, id. Bugotu: *hatautu*, id.
 Wedau, Kubiri, Kiviri, Oiun: *eta*, id. Raqa: *eta-fu*, id. Suau,
 Dobu: *eda*, id. Galavi, Boniki, Mukawa: *keta*, id. Sariba,

Murua, Kiriwina: *keda*, id. Nada: *keza*, id. Sinaugoro, Rubi: *da*, id. Wedau: *tete*, id. Nggela: *halautu*, id. Malekula: *ne-sar*, id. Aneityum: *ne-falaig*, id. Mota, Mosin: *matesala*, id. Pak: *me'esal*, id. Merlav: *metsal*, id. Volow: *metehal*, id. Motlav: *na-mtehal*, id. Sesake: *matakisala*, id. *matawirsal*, id. Vuras: *matekpwersal*, id. Lo: *luwomejal*, id. Mekeo: *ke-anga*, *inengea*, id.

Malay: *alah*, course, direction; *saleh*, a road; *jalan*, id. Silong: *jalan*, id. Java, Ilocan: *dalan*, id. Malagasy: *aleha*, id.

Arabic: *s'ala'*, to proceed, to call.

The Proto-Samoan stem is **hala**.

The Nukuoro *sailenga* is incomprehensible.

In Melanesia we find two groups of composites. That which occurs in the New Hebrides is in the simplest forms *mata* and *sala*, the evolutions of the former being here negligible. *Sala* varies to *sal*, *hal*, and *jal*. The last form is in Lo *luwome-jal*, of which the former member is obscure. The Solomon Islands composite is *hala-utu*, of which the succeeding member has so far escaped identification. In this group we have *hala*, *thala*, and *hata*, and on the *l-t* mutation see note 312. Saa and Wango involve the *h-t* mutation noted in 338, the same applying to Motu *dala* and Indonesian *dalan* and *jalan*. If Aneityum *na-falaig* be admissible we have no direct evidence in support of the *h-f* mutation, but *h-v* once occurs, *sina'a* (169) Sesake *vinaga*.

The Indonesian forms are satisfactory except for Malagasy with the anomaly of an interpolated syllable.

The Arabic has a form resemblance, but the sense is not at all satisfactory.

340.

seme, sama, the outrigger, or, more accurately, the part of the outrigger, shaped exactly like a canoe, which floats in the water.

Futuna: *ama*, the outrigger; *samatasi*, a small canoe. Tonga: *hama*, the outrigger, the smaller part of a double canoe; *jakahama*, to put an outrigger on; *ama*, the port side of a canoe (the outrigger side). Samoa, Tahiti, Marquesas, Mangareva, Tongarewa, Nuguria, Paumotu: *ama*, the outrigger. Maori: *ama*, the outrigger, in a double canoe the space between the two hulls. Hawaii: *ama*, the longitudinal stick of the outrigger. Fotuna: *ti-ama*, id.

Viti: *thama*, the outrigger. Rotumā: *sama*, id.

Mota, Tubetube, Brierly Island: *sama*, outrigger. Malo: *isama*, id. Bierian: *ni-hama*, id. Baki: *ni-ame*, id. Yaraikana: *tama*, id. Koko-Yimidir: *darman*, id. Nada: *dam*, id. Tangoan Santo: *tsama*, id. Tanna: *timen*, id. Malekula: *ni-jam*, id. Aneityum: *jmaing*, id. Kiviri, Oiun: *rama*, id. Raqa: *aurama*, id. Kubiri: *ramani*, id. Wedau: *g'ama*, id. Galavi: *gamanaki*, id. Mukawa: *g'amani*, id. Mugula, Kiwai: *sarima*, id. Sariba: *sarime*, id. Mabuig: *saima*, id. Motu: *darima*, id. Pokau: *dalima*, id. Hula: *ralima*, id. Kiriwina: *lamila*, *iamila*, id. Awalama, Taupota: *haruma*, id.

Malay: *sampan*, a small boat. Malagasy: *sambu*, a ship.
 Arabic: *safinat*, *safīn*, a ship, a vessel. Hebrew, Syriac: *sefīna*, id.

The Proto-Samoan stem is **hama**, which appears in Polynesia as *ama*, *sama*, *hama*, *thama*.

In Melanesia we find *sama*, *hama* and *ame*. The *h-ts* mutation in Tangoan Santo appears in Polynesia itself. The *h-t* mutation in *timen* is not elsewhere recorded from Tanna, but a glance at the table will show it to be not unusual in other parts of the Melanesian area. The same is to be said of Malekula *jam*, and this leads readily to Aneityum *jmaing*. The Torres Straits *sarima* and devolution forms lie outside the possibility of cordial acceptance.

The Indonesian identifications which Dr. Macdonald presents depend for their force upon the actual employment of an outrigger. This is not the common naval architecture of the *sampan*; it is quite out of the question in the Malagasy.

The value of the Semitic lies in the establishment of so small a part for so great a whole. Even were that acceptable the Semitic has a resemblance in but a single consonant.

341.

sili, to enter; **sili-fi a**, to enter into (as a spirit or demon into a man);
sili-faki, **sili-fiki**, to make to enter into, to thrust or throw into.

Samoa: *sulu*, to thrust into, to plunge into (as a canoe into waves), to take refuge in; *sulufa'i*, *fesulua'i*, *fesuluna'i*, to take refuge with; *suluma'i*, to thrust or push through or into. Tonga: *hulu*, to plunge, to push, to rush under water as a canoe in a heavy sea; *hulumaki*, to push in or through. Futuna: *sulu*, to put or place within, to thrust into. Niue: *huhulu*, to thrust, to push. Nukuoro: *sulu*, *suru*, to dive. Fotuna: *suru*, to dive, to swim under water.

Samoa: **sili**, to lodge in, to stick in (as a pen behind the ear); *silinga*, a penholder, the place to stick in the fish hook; *sisili*, to shoot, to dart (as pain from one part of the body to another). Tonga: *hili*, *hilifaki*, to lay or put upon; *hilinga*, a number of spears tied together, a platform on which things are laid. Niue: *hilifaki*, to stick in.

Viti: *thuruma*, to enter; *thurumaka*, to push a thing into or through. *thiliva*, to cut or lance the body.

Mota: *saro*, to go in; *saromag*, *sarovag*, to sheathe.

Malay: *julok*, to thrust into. Malagasy: *juluka*, to enter.

Arabic: *dahala*, *duh'ul*, to enter (a house), to take refuge with, to thrust in.

In form our Polynesian material preserves two distinct series, that in *u* and that in *i*, but the consonant skeleton is the same and the significations interlace. We are justified, therefore, in dealing with them, at least provisionally, as homogenetic. Both series are confined to Nuclear Polynesia.

For the *sulu* series we find Proto-Samoan stems **suluf**, **sulum**, **sulun**.

For the *sili* series we find a Proto-Samoan stem **silif**.

Viti has both series as derivatives of **sulum** and **silif**.

In Melanesia Efaté is of the *silif*-stem; Mota, with vowel changes, derives from the two stems *suluf* and *sulum*.

In Indonesia the two identifications are clearly of *sulu* with its proper final consonants abraded and passed from memory and then treated with a formative termination of Indonesian habit.

The Semitic must account for additional radical matter before we can accept the partial resemblance.

Where we have *sulu* and *sili* in parallel series we find it difficult to make a plain separation of the shades of signification. The utmost upon which we may venture is to note that the sense varies generally in relation to the size of the thing which is thrust, *sili* denoting the smaller or finer-pointed, this distinction being best seen in Samoa and Viti.

342.

sina, sinē, to shine, to be clear.

Sina, hina, ina, is used throughout Polynesia in the senses of glistening, white, gray.

Samoa, Futuna, Fakaafu, Sesake: *masina*, the moon. Tonga, Niuē, Uvea, Hawaii, Maori, Tahiti, Rapanui, Marquesas: *mahina*, id. Mangareva: *maina*, id. Nuguria: *masina, mahina*, id.

Viti: *singa*, the sun, day; *thina*, a torch, a lamp; *singasingau*, white.

Fagani: *sina*, the sun. Misima: *sinasina*, id. Nada: *silasila*, id.

Misima: *hilahila*, id. Dobu: *sinara*, id. Wango: *sina*, id.;

haasinaria, to dry in the sun. Nggela: *hina*, to shine (sun);

hinari, to burn. Belaga: *thina*, sunshine. Mota: *singa*, to

shine; *singasingai*, a shining; *singesinge loa*, sunshine (*loa*, the sun).

Lambell: *singsinge*, to dry (presumably by putting

out in the sunlight, as in Wango). King: *sengesengä*, id.

Lamassa: *sängsäng*, id. Merlav: *sing*, to shine; *singsinge aloa*,

sunshine. Gog: *sing*, to shine; *singsinge walo*, sunshine.

Aneityum: *gesega*, the sun. Doura, Motu: *dina*, daylight,

the sun. Uni: *tina*, the sun. Mekeo: *kina*, id. Uni: *dia*, id.

Malay: *siyang*, day, clear; *sinar*, a ray of light, luster; *ber-sinar*,

to shine; *sinar-bulan*, moonlight. Ilocan: *sinamar*, splen-

dor. Magindano: *sinang*, sun, midday. Java: *rahina*, day.

Sulu: *fasina*, the moon.

Arabic: *ṣaha'*, sun, day, to shine, to be clear. Ethiopic: *ṣahawa*, id.

Hebrew: *ṣahāh*, id.

It is matter of no slight interest to find that a stem which in Polynesia serves to designate the lesser luminary is used in Melanesia to denote the sun. In this connection our linguistic material has left two records. One that *la*, the general Polynesian word for the sun, was not carried in the Proto-Samoan migration, for it has left no trace in the Melanesian halting-places. The other that *masina*, the general Polynesian word for the moon, was brought into Polynesian, in its present derivative form, by the Tonga-fiti migration, for it is only in Sesake that we find *masina* as moon. Our Polynesian records show us that *sina* was a sun name, i. e., the shiner. At the same migration era the moon was also a shiner, see *pupula* 284. The Tonga-fiti now comes to Nuclear Polynesia bringing *la* sun and *masina* moon,

and the Proto-Samoan early colonists finding their earlier names not sufficiently differentiated, for the root sense of shining is equally in use, adopt the later forms. It is only in Niuē that we find a persistent relic of the older moon name, *pupula* the new moon. But Viti, untouched by the Tongafiti swarm, preserves *singa* sun and *vula* moon.

In Melanesia *sina* designates the sun, but there is not lacking evidence that its root signification of shining is close to the surface. Thus in Nggela, Mota, Merlav, and Gog *hina* does not denote the sun as a name but is used of its shining, and in three of these instances the Melanesian word for sun, *alo*, *walo*, *aloo* is subjoined.

In Indonesia we find *sina* in the root sense of shining. Malay *siyang* is not properly to be included, but *sinar* and its composites are unmistakable. The Magindano *sinang* is the only instance outside of Melanesia in which we encounter the sun sense. Java *rahina* seems to be a composite of *ra* sun and *sina* to shine.

The Semitic is, as so often in Dr. Macdonald's material, a one-letter resemblance and valueless.

343.

sīnu, sisīnu, to be hot, to burn (of the grass on the hills yearly); **sinu**, the burning of the grass, a place on which the grass has been burned; **tuni**, to heat; **tunu**, to heat, to oppress or make to suffer; **bitunu**, **bitin**, **bitsin**, to be hot, painful; **tutun**, to light up torches or the evening cooking fires.

- (a) Futuna: *masinu*, the smell of burning fat (feathers, hair). Hawaii: *ohinu*, to roast meat; *ohinuhinu*, to be parched and dried, as the outside of roast meat.

Viti: cf. *sinunganga*, a tree whose sap has a burning effect on the skin.

- (b) Samoa: *susunu*, to burn up; *sununga*, a burning; *sunusunu*, the burnt bush where a plantation is made; *masunu*, to singe (as the hairs of a pig). Futuna: *sunusunu*, to singe a bird; *susunu*, to burn, to broil, to put on the fire; *masunu*, burnt by the sun, the odor of burning hair or feathers. Tonga: *huhunu*, to singe, to sear; *hunuhunu*, to toast, to singe, to broil; *mahunu*, blighted. Niuē: *huhunu*, to burn; *mahunu*, to blister with heat. Uvea: *mahunu*, a burning. Maori: *hunu*, to char, to singe.

Viti: *kuro-susunu*, the name of a disease, an epidemic.

- (c) Samoa: *tunu*, to roast, to toast, to broil, to fry, to boil. Tonga: *tunu*, to toast, to broil. Futuna: *tunu*, to broil, to roast, to toast, to boil. Niuē: *tunu*, to broil, to boil, to roast. Maori: *tunu*, to roast, to broil, to burn. Tahiti: *tunu*, to roast, to boil. Rarotonga: *tunu*, to broil, to cook on embers. Marquesas, Rapanui, Nuguria, Nukuoro: *tunu*, to cook. Hawaii: *kunu*, to roast on embers. Uvea: *tutu*, to toast. Fotuna: *tuna*, to roast, to cook.

- (d) Samoa: *tūtū*, *tungia*, to set fire to, to kindle, to light (as a lamp); *tunga'i*, to light up a fire at night. Tonga: *tūtū*, to burn, to set on fire; *tungaki*, to light a beacon; *tungia*, to set on fire. Futuna: *tūtū*, to light, to burn, to set fire to; *tūngaki*, to light a beacon; *tungia*, to kindle, to set fire to. Niuē:

- tungi*, to light a fire or a lamp, to burn. Maori, Rarotonga: *tungi*, to kindle, to set on fire. Hawaii: *kuni*, id. Uvea: *tutu*, to set on fire. Tahiti: *tutui*, id. Rapanui: *tutu*, to kindle, to set on fire; *tutunga*, combustion.
- Viti: *tunu*, warm; *vakatunu*, to warm up cold food; *tutuvaka*, to light, to set on fire; *tungiva*, to kindle. Rotumā: *sunu*, hot; *fuf*, to light, to kindle.
- Buka: *sinanga*, warm. King: *suñūn*, fire. Laur: *songsong*, hot. King: *misongót*, id. Epi: *pisusunu*, id. Malo: *tunu*, to roast, to heat. Motu: *tunua*, to bake pottery. Marina: *tutunu*, hot. Gog, Lakon, Mota, Santo, Vuras, Mosin: *tutun*, id. Belaga: *tutun*, to burn. Duke of York, New Britain: *tun*, id. Pala: *tun*, to cook. Lo: *tun*, hot. Mota Maligo: *tin*, to roast over embers; Veverau: *tun*, id. Sasar, Alo Teqel: *i'in*, id. Lambell, Lamassa: *tuni*, to cook. King: *itutūn*, id. Mota: *tutunsag*, fever. Ulawa: *tunga*, fire. Bugotu: *totha*, to light (a lamp).
- Malay: *tunu*, to burn, to consume with fire. Macassar: *tunu*, to bake, to roast. Savu: *tunu*, to roast. Bugi, Landa, Binue, Baliyon: *tunu*, to burn. Sambāwa: *tunang*, id. Sassac: *tulu*, id. Lampong: *tunkan*, the hearth. Kandayan: *tinu*, to burn. Malagasy: *tono*, to roast.
- Arabic: *sah'ana*, *suh'un'*, to be hot. Hebrew: *s'ahan*, id. Syriac: *s'hen*, id.

Our Efaté material groups several consimilars exhibiting both vowel and consonant distinctions. These reduce to the four primitives *sinu*, *sunu*, *tunu*, *tung*. It is not difficult to trace these to a common source particularized by modulants. We shall examine these in detail.

sinu. This is the least frequent. It occurs in Efaté, Viti, enters Nuclear Polynesia by way of Futuna, and is found again in Hawaii, a landmark at that end of the direct migration to that outlier which was reached only in a roundabout circuit by its main, or Tongafiti, peopling. We lack Motu data, but, so far as Efaté-Viti-Futuna may determine the course, we are disposed to charge this to the Viti stream. The Viti *sinunganga* is a composite readily resolvable into this *sinu* hot and *ngángá* which is variously defined as poisonous, bitter, sour, salt, in other words highly objectionable. In Futuna *masinu* is of the common composition with *ma*-conditional; it is a synonym of part of the meaning of *masunu*. Hawaii *ohinu* is influenced by the local idiosyncrasy which prefixes to many verbs this distinctive *o*. The only forms in *i* noted elsewhere in our material are the not wholly satisfactory Buka *sinanga* and Kandayan *tinu*.

sunu. This also is a Nuclear Polynesian form, but as *sinu* pointed the way along the direct northern migration this points out the southern migration direct from Nuclear Polynesia to New Zealand. We have seen reason to credit *sinu* to the Viti stream; similarly we find reason to hold *sunu* to have been a particular form of the Samoa stream. *Sunu* does not appear in Efaté or in Viti, but its presence in Rotumā is significant by reason of the fact that this island lies northward from Viti. In Melanesia (except in

the single instance of Epi *pisusunu*) it is found only in King and Laur in the eastern gateway, and Buka *sinanga* may turn out to be a *sunu* form when we have more abundant data from the northern Solomons. In Nuclear Polynesia we have generally *sunu* and *masunu* with no great diversity; the only wide division in apparent signification is Tonga *mahunu*, and as to this the Baker vocabulary is too terse to enable us to draw any conclusion. The Viti *kuro-susunu* (*kuro* being a pot) is of uncertain application.

tunu. This is the form common to the Proto-Samoan and Tongafiti migrations; it is found in Viti and Polynesia generally, largely in Melanesia, and it has a good representation in Indonesia. *Sinu* and *sunu* have shown senses which imply contact with the naked fire, and that idea is largely predominant in *tunu*, as exemplified by the definitions of toasting, roasting, broiling, cooking on embers. Disregarding the instances in which the word is rendered by our general verb to cook we shall examine the exceptions to this naked flame sense. It is used of boiling in Samoa, Futuna, Niue, and Tahiti. It is significant that not one of these peoples had taken so much as the first step in fictile art, and such heating of water as was needed was performed by dropping hot stones into the water in a wooden bowl. Equally significant it is that in Viti, where pottery had advanced to the possession of luster and glaze, the word does not mean to boil (Viti: *kere*, *kerea*, to boil; *wewe*, *ndanda weruweru*, to boil to pieces). I have no hesitation, therefore, in ascribing this signification to the careless lack of precision of European influence. In Samoa alone is it used of frying and here there can be no doubt whatever; the infamy of the frying pan is distinctly European, the islanders had not that suicidal implement for the assassination of their digestion. In Melanesia the course of *tunu* may easily be followed. The Mota Maligo *tin* suffices to account for an unrecorded preduplication *titin*, and from this by excision of *t*, normal to those Vanua Lava dialects, Sasar and Alo Teqel obtain *i'in*. The Indonesian forms are all homogenetic with *tunu*.

tung. This also is common to the Proto-Samoan and Tongafiti migrations. It also shares the sense of the open flame but with this difference: the other forms have dealt with objects brought to the flame, this in its senses of lighting and kindling deals with the flame brought to some object, exactly paralleled by our English locution of setting fire to an object. The discriminating final consonant is carried over into the languages of the Tongafiti second swarming out of Samoa more distinctly than is commonly the case. Rotumā *fuf* is characteristic; Proto-Samoan *t* is commonly changed to *f* in that speech; therefore *fuf* is *tut*, a simple abrasion of Samoa *tūtū*. Viti has the word in two forms, *tungi* and *tutu*, and has applied to each its own formative terminations, these two forms representing the earlier epoch when Proto-Samoan retained its closed stem and the later in which it had undergone abrasion. This difference of development level also appears in Ulawa and Bugotu of the Solomon Islands.

The Semitic has the **shn** skeleton, and that does not accord with any of these island forms. Furthermore the meaning amounts to no more than heat, whereas the stems here assembled are explicit in their insistence, not upon warmth but upon the open flame.

susu, the breast, to suck the breast; **bakasusu**, to suckle.

Samoa: *sūsū*, the breast; *fa'asūsū*, to suckle. Futuna: *susu*, to suck; *u*, the breast. Tonga: *huhu*, the breast, to suck the breast; *fakahuhu*, to suckle. Niuē: *hūhū*, the breast, nipple; *fakahuhu*, to suckle. Uvea: *huhu*, the breast, the nipple, to give milk, to suck. Nuguria: *huhu*, milk; *u*, the breast. Tahiti, Rarotonga: *u*, the breast, milk. Maori, Hawaii, Marquesas, Mangareva, Paumotu: *u*, the breast. Fotuna: *ko-u*, to suck; *vai-u*, milk; *ta-u*, nipple. Rapanui: *u*, the breast; *vaihu*, milk.

Viti: *suthu*, the breast, to suck the breast, to be born.

Mota, Lamassa, New Ireland (Port Praslin), Mugula, Dobu, Galavi, Boniki, Mukawa, Kubiri, Kiviri, the breast. Laur: *susú*, id. Mabuiag: *sus(u)*, id. Motu, Suau: *susu*, milk. Aneityum: *nasusu*, an infant. New Ireland (Carteret Harbor): *susun*, the breast. Brumer Island: *susuga*, id. Buka: *ssussuge*, the nipple. New Ireland (Duffield): *susung*, *kasung*, the breast. Lambell, Pala, King: *sus*, id. Mota Veverau: *sus*, id.; Maligo: *sis*, id. Nada: *sese*, id. Buka: *mata na sus*, the nipple. Buka: *suss*, the breast. Waima: *tutu*, id. Kiriwina, Raqa: *nunu*, id. Oiun: *nuni*, id. Taupota: *g'ug'u*, id. Wedau: *gugu*, id. New Britain: *u*, id. Malo: *susu*, the breast, to suck. Baki: *yu*, milk, nipple. Malekula: *mi sus*, to suck; *na sus*, milk; *susin*, the breast. Bierian: *ohun*, the breast.

Wango: *haasusu*, to lay (of a hen). Mota: *vasus*, to give birth. Nggela: *vahu*, to be born. Norbarbar: *visis*, to give birth. Retan: *vusus*, id. King: *vusús*, id. Lambell: *'hiasús*, id. Lamassa: *iasús*, id.

Malay: *susu*, the breast, milk. Java, Bugi, Pampangas, Macassar: *susu*, the breast. Tagalog: *suso*, id. Matu: *susan*, id. Visayas: *dughan*, id. Kayan: *usok*, the breast; *so*, milk. Waigiou: *sus*, the breast. Waigiou Alfuros: *su*, id. Malagasy: *nunu*, id.

Hebrew: *s'od*, the breast. Arabic: *t'idý'*, *t'udiyy'*, id.

The data here collated will be found subject to a double complication. In Viti we find *suthu* meaning the breast, to suck the breast, to be born. If it were solitary we might strain analogies and strive to bring these two into correlation, but we need go no further than Wango *haasusu* to find reason to give over the effort, for it is only in botany that *ornithogalum* can be conceived of as even a remote possibility. It will best be disposed of by regarding *susu* of parturition as a distinctively Melanesian element which chances to have the same form as the Proto-Samoan *susu* the breast. In a separate paragraph I have set aside the Melanesian homogenetics of this non-Polynesian *susu*. It will be seen that in general it appears in composition with the causative *haa-va*, and in Lambell and Lamassa it will be observed that this has greatly disintegrated.

In the sense of the breast *susu* is distinctly a Proto-Samoan possession, primarily the breast and secondarily to suck the breast; for in Efaté, Samoa,

Tonga, and Niuē we find a causative to convey the latter signification. This form runs through Melanesia, and greatly to our surprise it prevails in Indonesia, where in general the agreement is more close with the Tongafiti stage of the Polynesian.

The Tongafiti word for breast is *u*. This we may not regard as a dilapidated form of *susu*, *su-hu-u*, for in that case we should expect the aspiration to be present in the languages in which it entails no difficulty. The only way in which I can adjust it to the *susu* series is to regard *u* as primal and *su* to have become a particularized form through the employment of a consonantal coefficient. In Nuclear Polynesia this *u*-form appears only in Futuna, a language in which Tongafiti influence is strongly marked—not so strongly in this instance, however, as to obliterate the Proto-Samoan *susu* to suck. At a distance, and in the western verge, *u* appears in Fotuna in the sense of sucking, which the word nowhere else carries, for in exterior Polynesia the words meaning to suck have no relation to the word for breast. New Britain *u* is of the Tongafiti type, and in Epi the Bierian *ohun* suggests a *su* form which undergoes yet further demolition in Baki *yu*.

The Indonesian identifications, as before remarked, are quite generally of the *susu* or Proto-Samoan type. The Malagasy *nunu* is out of order, for we have no data tending to establish an *s-n* mutation.

The Semitic proposed is **sd**, **td**, in structure a resemblance of but one consonant and without attempting to account for the other, therefore not to be accepted.

345.

ta i, **tata**, to chop, to cut, to speak or utter (as it were making a chopping noise).

Samoa: *tā*, to strike, to beat; *tatā*, to speak rapidly, to break fire-wood (by hitting a tree or a stone with the billet to be broken). Tonga: *ta*, to strike, to beat, to hew; *tai*, to strike, to beat. Futuna: *ta*, to strike, to beat, to cut, to hew. Niuē: *ta*, to strike, to kill, to adze. Uvea: *ta*, to strike, to cut. Maori: *ta*, to beat, to cleave, to split up. Tahiti: *ta*, to strike, to repeat or tell a tale. Rarotonga, Marquesas: *ta*, to strike, to beat, to kill. Mangareva: *ta*, to cut. Paumotu: *ta*, to strike, to cut (in composition). Nuguria: *taa*, to hew. Sika-yana, Moiki: *ta*, to strike. Nukuoro: *ta*, to cut. Hawaii: *ka*, to strike, to beat, to cut or split wood.

Viti: *ta*, *tata*, to chop or cut with an axe.

New Britain: *ta*, to strike. Moánu: *ta*, to beat, to strike. Malekula: *tai*, to cut.

Malay: *tatah*, to chop. Macassar: *tatta*, to fell, to cut off. Malagasy: *ta*, the sound of beating or knocking; *tatana*, to chop.

Arabic: *hadḡa*, to cut quickly, to utter speech quickly.

With this stem we have an irregular associate referring to speech. Efaté *ta* to speak, to utter; Samoa *tatā* to speak rapidly; Tahiti *ta* to tell a tale. Dr. Macdonald's parenthetical suggestion "as it were making a chopping noise" is far too childish for consideration. We must regard this as the survival of a *ta*-vocalable elsewhere forgotten.

The root *ta* I have already (27 American Journal of Philology, 383, 386) treated by dissection to the seed and consonantal coefficient, and have developed the suggestion that "the root *ta* through its long series of known combinations carries a strongly featured sense of action that is peripheral, centrifugal, and there seems to be at least a suspicion of the further connotation that the action is exerted downward." Thus in most of our Polynesian occurrences of the simple root and in two out of the three Melanesian identifications we find the primal sense to strike. The secondary sense of cutting will easily be seen to be a striking with a specialized implement, and we find this sense stated without recognition of the primal striking only in Mangareva, Nukuoro, Viti, and Malekula.

In Indonesia this secondary sense is predominant, although Malagasy *ta* may come somewhat close to the striking idea.

The Semitic is far too complex, **hdd**, to stand in kinship with the simplicity of our *ta*.

346.

tangi, to wail, to cry, to ring, to sing, to clank, to hum; **tangi-si**, to bewail.

Samoa: *tangi*, to chirp, to bellow, to roar, to wail, to lament, to weep, to chant a poem, to complain; *tatangi*, to tinkle, to ring. Tonga: *tangi*, to cry, to weep, to call out; *tatangi*, to ring, to tinkle; *taangi*, to chant a poem. Futuna: *tangi*, to weep, to groan, the cry of any animal, the sound of any implement. Niue: *tangi*, to weep, to cry. Uvea: *tangi*, to weep, to shed tears, to howl, the cry of animals, to appeal to. Maori: *tangi*, to cry, to sound, to coo, to roar, to weep, to wail; *tatangi*, to rattle, to jingle; *takitaki*, to recite a song. Mangaia: *tangi*, to sound, to cry, to sing, to wail, to weep, to lament. Mangareva: *tangi*, to mourn, to wail, to weep, to sing, to make a noise, the sound of a bell or of a trumpet. Rapanui: *tangi*, to cry, to howl, to groan, to weep, to pity, to covet. Paumotu: *tangi*, *tatangi*, to weep, to bewail, to lament. Tongarewa, Nukuoro, Manahiki, Fakafo: *tangi*, to cry. Aniwa: *noko-tangi*, id. Vate: *tetangi*, id. Nuguria: *hakatani*, to bewail. Marquesas: *tani*, *taki*, to sound, to sing, to bark. Tahiti: *tai*, to sound (as an instrument), to weep, to cry; *tatai*, to rehearse or recapitulate the particulars of an agreement. Hawaii: *kani*, to make a sound more or less musical, to hum a tune, to sound (as a trumpet), to make a report (as a gun), to crack (as a whip), to rumble (as thunder), to squeak, to crow; *kanikani*, to tinkle.

Viti: *tangi*, to cry, to weep aloud, to lament, to crow, to sing.

Nguna: *tangi*, to weep. Omba: *tangi*, to cry; *tangisi*, to cry for someone. Nggela: *tangi*, *tangihia*, to lament; *tangitangi*, to sing (of birds). Vaturanga: *tangi*, to weep; *tangisia*, to weep for. Bugotu: *tangi*, to weep; *tangihia*, to weep for. Nggao: *tangi*, to weep. Matupit: *tangi*, to cry. Baravon: *tangi*, to weep. Belaga: *tangi*, sounding (of a bell). Lambell: *tangis*, a tear. Maewo: *tangtangisa*, pitiful; *tangtangisi*, to

feel pity for, to show mercy to. Mota: *tangi, tangis, tangtang*, to cry, to weep. Vuras: *tengteng*, id. Motlav: *teng*, id. Sinaugoro: *tagi*, to weep, to cry. Motu: *tai*, to cry, to howl, to weep. Redscar Bay: *tai*, to cry. Aneityum: *taing*, to cry, to weep; *ataingataing*, to sing (as a kettle before boiling). Santo: *toni*, to cry. Malekula: *teng*, to cry; *tengsi*, to bewail. Malo: *tangtange*, to cry; *tangisia*, to bewail. Baki: *jengi*, to weep, to bewail. Tangoan Santo: *tangi*, to cry; *tangsia*, to bewail. Pokau: *kani*, to weep, to cry. Uni: *cani*, id. Hula, Keapara, Galoma: *agi*, id. Roro: *hai*, id. Waima: *hai*, to cry. Malay: *tangis*, to weep. Siwa: *tangi*, to weep. Tagalog: *taghoy*, to weep, to lament. Java: *nangis*, to weep. Kayan: *nangi*, id. Ilocan: *sangit*, to cry, to weep floods of tears. Malagasy: *tany*, a cry, a lamentation. Arabic: *tanna*, to tinkle, to clank, to ring, to hum; *tanien*, din; *tantun*, to tinkle, to jingle.

The Proto-Samoan stem is **tangis**.

The significations are polyphase; therefore the time will not be ill employed in segregating them into such classes as may be found to exist.

A. Non-vocal. Samoa, Tonga, Futuna, Maori, Mangareva, Tahiti, Hawaii, Efaté, Belaga, Aneityum.

B. Vocal.

a. *The animal cry*: Samoa, Futuna, Uvea, Maori, Marquesas, Hawaii, Viti, Nggela.

b. *The human voice*:

1. *Sounds of pleasure*: Samoa, Tonga, Maori, Mangaia, Mangareva, Marquesas, Tahiti, Hawaii, Viti, Efaté.

2. *Sounds of pain*: Samoa, Futuna, Niuē, Uvea, Maori, Mangareva, Mangaia, Paumotu, Tongarewa, Nukuoro, Manahiki, Fakaafo, Aniwa, Tahiti, Viti, Efaté, Omba, Motu, Redscar Bay, Santo, Malekula, Nggela, Mota, Vuras, Motlav, Aneityum, Matupit, Malo, Baki, Tangoan Santo, Tagalog, Ilocan, Malagasy.

2a. *The howl and the tear*: Samoa, Tonga, Futuna, Uvea, Maori, Mangaia, Mangareva, Paumotu, Tahiti, Viti, Nguna, Vaturanga, Bugotu, Nggao, Baravon, Mota, Aneityum, Baki, Malay, Siwa, Tagalog, Java, Kayan, Ilocan.

2b. *The wail of petition*: Samoa, Uvea.

To these should be added Lambell *tangis*, a tear, and Maewo *tangtangisi*, in which the tear drops in pity. Until we reach the ultimate items the common factor of this wide range of significations is the inarticulate sound, and even where it distinctly means to sing or chant the sense rests upon the music and not the words.

The form calls for no extended comment beyond the general remark upon the frequency with which the final *s* is preserved. Aneityum *taing* is metathetic. The *a* varies to *e* in several New Hebridean languages, and in Santo to *o*. Java and Kayan show the *t-n* mutation which appears in four New Ireland languages in 329. Ilocan *sangit* seems to be a most unusual metathesis, type 52341.

The Arabic approaches but a small sector of the sense of **tangis**, shows no sign of the radical *s*, and is really in resemblance only so far as relates to the initial consonant, no satisfactory showing of kinship.

tai, excrement, filth.

347.

Samoa: *tæ*, excrement. Tonga: *tæ*, excrement; *tee*, dung of animals. Futuna: *taè*, excrement. Uvea: *tæ*, id. Niuë: *te*, id. Maori: *tæ*, gum exuding from plants; *tahæ*, filth; *tutæ*, excrement. Tahiti: *tutæ*, *tiataæ*, id. Marquesas: *kae*, slaver; *tutæ*, excrement. Mangaia, Mangareva, Paumotu: *tutæ*, id. Rapanui: *tutæ*, excrement, mildew. Moriori: *hokotæ*, disgusting, abominable. Hawaii: *kukæ*, excrement, dirt, filth; *haukæ*, filthiness; *kae*, the exterior of the anus. Fotuna: *tah-tai*, excrement.

Viti: *nda*, excrement of man; *nde*, of beast.

Motu: *tage*, excrement. Hula: *kage*, id. Matupit: *taka*, id.

Brierly Island: *tai*, dung. Malo: *tai*, excrement. Baki: *ta*, *te*, id.

Mota: *ta*, *tæ*, id. Malekula: *ne-ten*, id. Aneityum: *in-tin*, id.

Malay, Macassar: *tai*, dung, ordure, excrement. Magindano: *tæ*, id.

Malagasy: *tay*, id.

Hebrew: *šeah*, excrement, filth, from *yaša'* to go out.

The simple stem *tæ* is Proto-Samoan, the Tongafiti has *tutæ*. This discrimination gives us a time measure for the Moriori *hokotæ* (*hoko* is the equivalent of *faka* of resemblance). Once more we have a landmark of the direct southern migration and we find it to be Proto-Samoan.

Tonga and Viti distinguish between man and beast, and by the same means. A similar form distinction is found in Baki, but we lack information of a corresponding source distinction. In Aneityum *in-tin* refers to beasts and a word of another stem, *nohok*, refers to men.

That this should voluntarily be assumed as a personal name passes comprehension. Yet in the ancient story of the swimming sisters (teratologically a Siamese twin monster) of Samoa the first object seen glistening on a Tutuila beach on which they came to shore caused one of the sisters to give herself the name *Taemā* (*mā* to shine). Exactly the same word appears in Mota *gak taema* as an endearing expression of admiration.

The Motu and Matupit forms with an inner palatal are listed for so much resemblance as they possess; I doubt their affinity. The Malekula *ten* and Aneityum *tin* are of this stem with the local assumption of *n*-ephehktastic.

The Indonesian identifications are quite satisfactory. I note again the accord with the Proto-Samoan rather than the Tongafiti and later form.

Except for the subject the Hebrew offering can have nothing whatever to do with this stem.

348.

tale, a belt, rope, string.

Nukuoro: *tali*, a rope.

Viti: *ndali*, a rope or large cord.

Mota: *tali*, a cord. Wango: *tali*, a rope.

Malay: *tali*, a rope, string, bandage. Malagasy: *tadi*, a rope.

Arabic: *dāra*, to go round, to whirl, to turn.

Although established at few points this stem is of peculiar value. We note its identification at two Indonesian points, at three in Melanesia, and in Viti. In another subdivision of these data we have encountered several instances of stems common to Indonesia, Melanesia, and Viti. This instance very brilliantly illuminates those, for here we are prevented from assuming a Polynesian migration which got no nearer its destination than Viti. *Tali* is found nowhere in Nuclear Polynesia or exterior migration lands, but it is found in Nukuoro. That distant island, almost a backward eddy, we have already shown to have received its population from Samoa in a secondary colony. The preservation of *tali* on Nukuoro shows it to have existed in Samoa at the time of this northern voyage. Since the date of that voyage *tali* has vanished from Samoa and in Nuclear Polynesia has been replaced by *maea* (62).

The Semitic proposed has a consonantal resemblance, but there is absolutely nothing in signification to support the resemblance.

349.

tale, the taro (so called because round; **tālo**, **taltāl**, round).

Samoa, Fakaifo, Tonga, Futuna, Niuē: *talo*, the taro. Maori, Tahiti, Mangareva, Bukabuka, Rarotonga, Fotuna, Aniwa, Vaté: *taro*, id. Nukuoro: *taro*, *tao*, id. Moiki: *tango*, id. Marquesas: *tao*, id. Hawaii: *kalo*, id.

Viti: *ndalo*, the taro.

Motu: *talo*, the taro. Eromanga: *tal*, id. Aneityum: *in-tal*, id. King, Rubi: *kāli*, id. Sinaugoro: *kare*, id. Hula: *kale*, id. Keapara: *ale*, id.

Malay: *talās*, the taro.

Arabic: *dāra*, to go round, to whirl, to turn; *da'ro*, orb, round.

This staple food product is excellently identified in our three island areas.

The etymology in Efaté "so called because round" is worse than childish; it is a fabrication to establish an identity with the Arabic proposed. After observing that Arabic *dāra* has just been employed (348) to account for the cylindrical slimness of a cord and now for the roughly ovoid shape of the *taro* underground stem, than which two objects could scarcely be more dissimilar, one pauses in wonder at the mental process.

350.

tālīga na, **linga na**, **nālīga na**, the ear.

Samoa, Fakaifo, Futuna, Uvea: *talinga*, the ear. Nukuoro: *talinga*, a horn; *taninga*, the ear. Maori, Rarotonga, Paumotu, Fotuna, Manahiki, Aniwa, Fotuna, Rapanui: *taringa*, the ear. Nuguria: *tarina*, id. Sikayana: *kautalina*, id. Liueniua: *karinga*, id. Tahiti: *taria*, id. Tonga, Niuē: *telinga*, id. Mangareva, Vaté: *teringa*, id. Moriori: *tiringa*, id. Moiki: *tanginga*, id. Marquesas: *pu-aika*, *pu-aina*, id.

Viti: *ndalinga*, the ear. Rotumā: *faliang*, id.

Pala, New Britain, Nguna, Duke of York: *talinga*, the ear. Laur: *talingá*, id. King, Lambell: *talngá*, id. Buka: *dalinga*, *talinga*, *taliga*, id. New Georgia: *talenge*, id. Sesake, Epi, Lo, Bougainville, New Georgia: *ndalinga*, id. Wango, Fagani: *karinga*, id.

Marina, Vella Lavella (Bilua): *salinga*, id. Ulawa, Bululaha, Alite: *alinga*, id. Saa: *alinge*, id. Kiriwina: *taigila*, id. Tavara, Awalama, Taupota: *taniga*, id. Wedau: *tanig'a*, id. Suau, Mukawa, Kwagila, Raqa: *taina*, id. Mugula, Kiviri: *teina*, id. Oiun: *tain*, id. Galavi, Boniki: *teini*, id. Dobu: *tena*, id. Murua: *tēga*, id. Nada: *tina*, id. Panaieti, Misima: *tanān*, id. Motu: *taia*, id. Redscar Bay: *taiya*, id. Pokau, Doura: *kaia*, id. Kabadi: *kaina*, id. Roro: *haiana*, id. Mekeo: *aina*, id. New Ireland (Carteret Harbor): *pralenhek*, *palalignai*, id. New Ireland (? Tregear): *plahingia*, id. Eromanga: *teligo*, id. Lakon: *telngan*, id. Lamassa: *telngā*, id. Pak, Sasar, Alo Teqel: *telnegi*, id. Motlav: *ndelngege*, id. Volow, Norbarbar: *ndelngigi*, id. Bierian: *seligo*, id. Moanus: *ndrilinga*, id. Baki: *tiline*, id. Tanna: *numateligēn*, id. Aneityum: *tiknga*, id. Malekula Pangkumu: *riringa*, id. Ambrym: *ringi*, id. Natalava: *kulinda*, id. Nggela: *kuli*, id. Malay, Bouton, Dyak, Visayas: *talinga*, ear. Java, Basakrama: *talingan*, id. Menankabau: *talingo*, id. Satawal: *talinhē*, id. Chamorri: *talanga* (*talanja*), id. Ulea: *talenga*, id. Malagasy: *tadiny*, id. Sulu, Tagalog: *tainga*, id. Silong: *tengeh*, id. Teor: *karin*, id. Malay, Sula, Baju: *telinga*, id. Mayapo: *telingan*, id. Morella: *telina*, id. Batumerah: *telinawa*, id. Liang, Lariko: *terina*, id. Awaiya: *terina-mo*, id. Caimarian: *terinam*, id. Saparua: *terena*, id. Cajeli: *telila*, id. Wahai: *teninare*, id. North Borneo: *linga*, id. Matu: *lingah*, id. Massaratty: *linganani*, id. Bugi: *tjuling*. Macassar: *toli*, id. Hebrew: 'ozen, 'azēnaim, 'azēne, the ear. Syriac: 'adna, id. Chaldee: 'uden, 'udēna, id. Arabic: 'uḍn', 'aḍān', 'uḍun', id.

In the study of this material we shall need to concern ourselves with form variety. The signification is everywhere the same, the ear. This refers to so much of the ear as is known to the rude anatomy of these islanders, the outer ear. The externality is so distinct that in Nukuoro we find the word serving for a horn. We shall examine the more regular of these variants point by point, the vowel variety scarcely calling for comment.

T. This is found in all Polynesia but one, in Indonesia (except Teor, North Borneo, Matu, Massaratty), and in Melanesia as follows: Efaté, New Britain, Duke of York, Nguna, Laur, King, Lambell, Lamassa, Buka, New Georgia, New Guinea (Motu, Redscar Bay), Eromanga, Lakon, Pak, Sasar, Alo Teqel, Baki, Tanna, Aneityum.

d, nd. Viti, Buka, Sesake, Epi, Lo, Bougainville, New Georgia, Motlav, Volow, Norbarbar, Moanus.

k. Wango, Fagani, Natalava, Nggela, Teor.

s. Marina, Bierian.

f. Rotumā.

Vanished: Marquesas, Ulawa, Bululaha, Alite, Saa. To this are to be added the instances of abrasion of the first syllable: Efaté, Ambrym, Malekula Pangkumu (regarded as preduplicated *ringa*), North Borneo, Matu, Massaratty.

L. As *l* or *r* it is present in all Polynesia but three, almost all Indonesia, and a large part of Melanesia. The variants are here noted.

ng. Moiki. **n.** Nukuoro, Wahai. **k.** Aneityum. **d.** Malagasy.

Vanished: Marquesas, Motu, Redscar Bay, Sulu, Tagalog. In Silong the whole syllable *li* has vanished. In the following languages the *l* is preserved but the *i* has vanished: King, Lambell, Lamassa, Lakon, Pak, Sasar, Alo Teqel, Motlav, Aneityum, Norbarbar, Volow.

NG. This is most extensively preserved. We may not attempt to list the *g*-forms, for our vocabularies are uncertain in the employment of *g* for *g* and for *ng*. The variants are as follows.

n. Pak, Sasar, Alo Teqel, Baki, Malagasy, Teor, Morella, Batumerah, Liang, Lariko, Awaiya, Caimarian, Saparua, Wahai.

nd. Nggela.

l. Cajeli.

Vanished: Marquesas, Motu, Redscar Bay. The whole final syllable *nga* has been lost through abrasion in Nggela and Macassar.

The following forms call for particular notice. Rotumā *faliang* is *taliang* and that is seen to be metathetic. Three New Ireland forms are anomalous. One, *plahingia*, is cited by Tregear without memorandum of source. The others are derived from Gaimard's Carteret Harbor in the "Voyage of the Astrolabe," almost a century ago. The region is that covered more closely in 1904 by Stephan, under the name of Lamassa. Allowing for less skill in catching the sounds in Gaimard's brief sojourn, *pralenhek* and *telnga* and *palalignai* are in fair accord as regards the *linga* element and *plahingia* is not far removed. In the older forms we find initial *t* obscured, but the obscurity takes the form of a reinforced liquid, *pr*, *pl*, *pal*. While we may not hope at this lapse of time to reduce this difficulty we note that in Moánuš, in the same gateway area, the initial *t* is in the form of a reinforced liquid.

The Semitic forms reduce to 'zn, 'dn, neither of which may be at all associated with *tlng*, the universal stem of our island forms.

351.

tanu e, tanua, tani, taniu, to spit; tanua, taniu, spittle.

Samoa: *ānu*, to spit; *ānusanga*, spittle; *ānusālo*, to hawk up phlegm.

Tonga: *aanu*, spittle, to spit; *anuhia*, to spit upon, to bedaub.

Futuna: *aānu*, *aānusi*, to spit. Uvea: *aanu*, id. Niue:

anu, id. Mangareva: *anuanu*, id. Marquesas: *anuanu*,

spittle. Rapanui: *aanu*, saliva, to spit. Maori: *anuanu*,

offensive, disgusting. Tahiti: *manuanu*, loathsome, surfeit-ing, to be qualmish.

Viti: *kanusi*, to spit. Rotumā: *onusi*, id.

Nggela, Bugotu: *angusu*, to spit. Mota: *anus*, id. Lakon: *anuh*, id.

Lo: *ngenguh*, id. Wango, Fagani: *ngusu*, id. Saa, Ulawa:

ngisu, id. Bululaha: *nisu*, id. Ngao: *misu*, id. New

Georgia: *kamisu*, id. Boniki: *kanu*, to spit. Kubiri: *kanu*,

spittle. Mukawa: *bi-kanu*, to spit. Kubiri: *kakanu*, id.

Kiviri: *kakan*, id.; *kan*, spittle. Volow: *ngih*, to spit. Motlav: *nih*, id. New Ireland (Carteret Harbor): *piniss*, id. Alite: *ngilu*, id. Motu: *kanudi*, id. Pokau: *anodi*, spittle, to spit. Boniki: *kanuna*, spittle. Mukawa: *kanuta*, id. Sinaugoro: *kanunu*, spittle, to spit. Rubi: *kanuru*, id. Hula: *kaninu*, id. Keapara: *aninu*, id. Nada: *kinura*, id. Misima: *kunruvi*, to spit. Wedau: *anumai*, spittle. Galoma: *aniulu*, to spit; *atiulu*, spittle, to spit. Kabadi: *ainuku*, to spit. Malekula: *rut*, id. Malo: *lito*, id.

Malay: *ludah*, to spit.

Arabic: *rawwala*, *tarwilu*, spittle.

Three stages of stem form are included in these data, **kanus**, **anus**, **nus**.

The longer form **kanus** is found most definitely in the Viti stream. Motu gives us *kanudi*, the *s-d* mutation having already been noted in this language in *sina* (342) to shine Motu *dina* and receiving support from similar mutations to be found in the table. Efaté with *k-t* mutation gives us the abraded form *tanu*, and Viti comes back to normal in *kanusi*. New Georgia, with an inner mutation later to be discussed, falls into this line, and so, but less obviously, does Lo *ngenguh*. Gaimard's New Ireland form may be taken as an obscure record of a **kanus** form, but no particular reliance is to be placed upon it.

The Proto-Samoan stem is **anus**, abraded to *anu* in modern Polynesian, save where formative suffixes have availed to protect the terminal consonant. This reaches into Rotumā *onusi* and with slight modification to Nggela and Bugotu *angusu*. As a closed stem it is found in Mota *anus* and Lakon *anuh*.

The **nus** stem is found in Wango and Fagani *ngusu*, Saa and Ulawa *ngisu*, Bululaha *nisu*, Volow *ngih*, Motlav *nih*. Nggao *misu* involves an *n-m* mutation for which we have no confirmatory data save such as may be derived from the *ng-m*, *m-n*, *m-ng* listed in the table. It follows so closely upon Bululaha *nisu* that it is probably safe to accept it. Alite *ngilu* involves another mutation, *s-l*, for which we lack outside support save as it may be found in *s-r* discussed in note 329.

Malekula *rut* and Malo *lito* fall into accord with Malay *ludah*, but it would require a long line of well-established transition forms to bring that into affinity with any part of the **kanus** stem.

And the Arabic is utterly out of place.

352.

tas, **tasi**, the sea, salt:

Tonga: *tahi*, the sea; *fakatahitahi*, to wet with salt water; *taitai*, brackish. Niue: *tahi*, the sea, the seacoast, the tide; *puke tahi*, *vaitahi*, salt water. Samoa, Maori, Rapanui, Nuguria: *tai*, the sea, the tide. Futuna, Tahiti, Mangaia: *tai*, the sea, the seacoast. Marquesas: *tai*, the sea, the shore; *taitai*, slightly salt. Mangareva: *tai*, the sea, the shore, salt water. Tongarewa: *tai*, salt. Nukuoro: *tai*, the sea, salt water, the south. Uvea, Rarotonga, Manahiki, Aniwa, Fotuna, Vaté: *tai*, the sea. Sikayana: *waitai*, salt water. Hawaii: *kai*, sea, salt water. Viti: *tathi*, the sea. Rotumā: *sasi*, *sosi*, *seas*, id.

(a) in the sense of sea:

Marina, Tanna, Sesake: *tasi*. Lambell, King: *täsi*. Buka: *tassi*, *dassi*, *tisi*, *itis*. Santo: *tosi*. Epi: *tzi*, *tsi*. Pala: *tës*. Kalil: *taas*. Moanus: *ndras*. Laur: *lontas*. Belega: *tathi*. Arag, Nggela: *tahi*. Makura: *na-tah*. Matupit: *ta*. Ambrym: *tei*, *tie*. Epi (Southeast): *si*. Wango: *asi*. Malekula: *nitis*. Malo, Mota: *tas*. Baki: *tei*. Bierian: *sahi*. Eromanga Ura: *de*.

Kawi, Bugi, Java: *tasik*. Malay: *tasek*. Gah: *tasok*. Ceram, Ahtiago: *tasin*. Tobo, Ahtiago, Ceram, Guaham: *tasi*. Togean Islands: *tasie*. Chamorri: *tahsi*. Satawal: *tati*. Matabello: *tahi*. Sunda: *chai*. Macassar: *djai*.

Arabic: *ta's*, the sea.

(b) in the sense of salt, salt water:

Sesake, Marina, Vaturanga: *tasi*. Arag, Omba, Nggela, Bugotu, Nggao: *tahi*. Maewo: *tas*. Ulawa, Wango, Fagani, Saa, Alite: *asi*. Bululaha: *moi asi*. Motu: *tadi*. Duke of York: *tai*. New Britain: *ta*.

Amboyna: *tasi*. Awaiya, Caimarian: *tasie*. Buru: *sasi*. Tidore, Gani, Galela: *gasi*. Sanguir: *asing*.

The Proto-Samoan stem is **tahi**. The form with aspirate is selected as primal for the reason that a Proto-Samoan *tasi* would have remained *tasi* in modern Samoan and would have become *tahi* in most of Polynesia.

It is only in Tonga *tahi* sea, *taitai* brackish, that we recognize any form distinction of the two significations. While, therefore, they have been segregated in the data collated we shall consider the form variants together.

In addition to the sense of sea and salt water, hardly to be dissociated, we find in Polynesia the following added significations:

Tide: Samoa, Niuë.

Shore: Niuë, Futuna, Tahiti, Marquesas, Mangareva, Mangaia. This is a development out of the system of direction nomenclature, for as *ki uta* means landward, so *ki tai*, seaward, is limited by the shore as the end of pedestrian locomotion.

South: Nukuoro. This has for us a peculiar interest. Nukuoro is but a tiny speck of an island; 360 degrees of its horizon show nothing but the upward saucering of unbroken sea. It was over the southern sea of 3,000 miles that the people came voyaging from Samoa. It must have been a bitter drift of castaways coming famished to land when generation after generation has preserved the word for sea, the terrible sea over which they struggled, in the sense of south. Other seas there about them, to north, to east, to west; but a race impressed by the agony of its castaway forebears still recalls the one sea, the south.

The forms *tasi*, *tahi*, *tathi* are very clearly identifiable in Melanesia and Indonesia. Epi *tzi*, *tsi*, are, of course, *tasi* with loss of the former vowel. The *tas* by abrasion is found in Malo, Mota, and Maewo; and *tis* in Buka *itis*, Malekula *ni-tis*. Next we find *tah* in Makura *na-tah*, and a still further progress in New Britain and Matupit *ta*, followed by Ambrym *tei*, *tie*, Baki *tei*, Eromanga Ura *de*. Laur *lontas*, is a composite, Kalil *taas* is recogniz-

able, and Moánu*s ndras* presents the irregular reinforcement which has before been noted in words from that speech. Bierian *sahi* corresponds to Rotumā *sasi* and *sosi*, of which *seas* is a metathetic stage, and to Buru *sasi*. Motu *tadi* finds a parallel in Satawal *tati*, and Duke of York *tai* in the modern Polynesian form is not far remote from Sunda *chai* and Macassar *djai*. Frontal abrasion yields *asi* in the Solomon Islands, Ulawa, Wango, Fagani, Saa, Alite, and Bululaha, and *asing* in Sanguir. The Epi *si* is another step in such abrasion readily reached through its *tsi* form. The *gasi* of Tidore, Gani, and Galela smacks of the palatalization of *t* now affecting Samoa.

The Arabic is a resemblance.

353.

tiko, a staff, a walking-staff, a pole by which a canoe is poled forward in shallow water.

Nukuoro: *tokotoko*, a pole. Tonga: *toko*, a canoe-pole, to punt; *tokonaki*, to rest the hand on anything. Futuna: *toko*, a canoe-pole, to punt; *tokotoko*, a long staff, a cane; *tokoi*, to support. Niue: *toko*, a prop, to support; *tokotoko*, a staff. Uvea: *tokotoko*, a staff; *tokoni*, to support, to prop. Maori: *toko*, a pole, to punt; *tokotoko*, to support oneself with a stick. Marquesas: *totoko*, to prop up with a stick; *tokotoko*, a stick, a cane. Manga-reva: *toko*, the pole of a raft, to punt; *tokotoko*, a stick. Rapanui, Paumotu: *tokotoko*, a walking-stick. Samoa: *to'o*, a canoe-pole, to punt a canoe; *to'oto'o*, a staff, a walking-stick; *to'onai*, to lean upon a staff or anything for support. Tahiti: *too*, a canoe-pole; *tootoo*, a staff or walking-stick, to punt. Hawaii: *koo*, to punt; *kookoo*, a staff.

Viti: *ndoko*, a punting-pole; *toko*, a prop, a pole to boom out the sail; *tokona*, to prop up. Rotumā: *oi-tok*, staff.

Mota: *tigo*, a pole; *tigonag*, to pole a canoe; *tigotigo*, to use a walking-stick. Malo: *tiko*, a walking-stick.

Malay: *tâkân*, a staff. Kacassar: *tokong*, to push with a pole.

Malay: *tongkat*, a walking-stick. Tagalog: *tungcod*, id.

Pampangas: *tucud*, id. Malagasy: *tehina*, a staff; *mitehina*, to walk with a staff, to walk leaning on a person.

Arabic: *toka'at*, a staff, a support, he who leans much on his side and props himself up.

The Proto-Samoan stem is **token**.

The primal signification is the verbal one of supporting or propping. This is made clear in Rotumā *oi-tok*, *oi* tree, *tok* to support, hence a staff.

In Melanesia the three identifications agree upon the vowel change to *tiko*, and Mota preserves the radical *n*.

In Indonesia the Malay *tâkân* and Macassar *tokong* are satisfactorily associated with **token**, and Malagasy *tehina* lags only a pace behind. But Malay *tongkat* and the similar forms in Tagalog and Pampangas are not readily reconcilable.

The Arabic shows no trace of the radical *n*, and in added material differs from **token** to such an extent that we may not accept it as a resemblance.

354.

tiri, riri, to fly; **lea ki**, to toss away, to throw down, to sweep, to drive away (as the wind trees); **leleaki**, intensive.

Samoa: *lele*, to fly; *felelei*, id.; *lelea*, to be driven off or carried away by the wind; *talele*, to escape quickly; *fetūlele*, a shooting star; the root *le* seems to appear in *leangiangi*, an eminence exposed to the breeze. Nukuria: *ele*, to fly soaring. Nukuoro: *lele*, to leap, to jump; *manulele*, a bird. Tonga: *le*, to drive, to affright fish into the net with a rod; *lele*, to run; *lelea*, to be wind-driven; *fakalele*, to make a cast of birds, to fly a kite; *leleaki*, *leleekina*, to run with; *malele*, to run. Futuna: *lele*, to run swiftly, to fly; *lelea*, to be wind-driven. Niuē: *lele*, to fly, to flow (as water). Uvea: *lele*, to fly, to run. Hawaii: *lele*, to fly, to jump, to leap, to move swiftly, to move as a meteor through the air; *lelele*, to leap, to jump, to fly quickly; *lelelele*, to run off in haste. Maori: *rere*, to run (as water), to fly, to flee, to sail, to leap, to go swiftly. Tahiti: *rere*, to fly, to leap. Rapanui: *rere*, to fly; *vae rere*, to run; *hakarere*, to abandon, to abjure. Mangareva: *rere*, to fly, to leap; *irere*, to run. Rarotonga: *rere*, to fly, to flee. Moriori: *rere*, to run (as water), to fly. Paumotu: *rere*, to fly, to soar, to leap. Fotuna: *rere*, *lele*, to fly. Marquesas: *ee*, to go, to go away; *cepau*, to leap; *hee*, to fly, to soar.

Viti: *lele*, to pass or go a short journey; *lelele*, a ferry canoe.

Rotumā: *ferefere*, to fly.

Motu: *lele*, to swim (as a fish). Mota: *rere*, set of sea, current.

Malay: *leleh*, to flow.

Arabic: *tāra*, to fly, to be swift, to move quickly.

In the present phase of Polynesian *lele* so much means to fly that the plainest way of particularizing birds is to describe them as the flying animals, *manulele*. But it is manifest that flight, an exercise or balancing of wings, was by no means the primordial sense, for how could that give rise to a description of water in the water-courses? It will be well to mass the several significations which *lele* exhibits.

Flight of birds: Samoa, Nukuoro, Tonga, Futuna, Niuē, Uvea, Hawaii, Tahiti, Mangareva, Maori, Rarotonga, Moriori, Paumotu, Rapanui, Fotuna, Efaté.

Wind driven: Samoa, Tonga, Futuna, Efaté.

Meteors: Samoa, Hawaii.

To leap: Nukuoro, Hawaii, Maori, Tahiti, Mangareva, Paumotu, Marquesas.

To run: Samoa, Tonga, Futuna, Uvea, Hawaii, Maori, Mangareva, Rarotonga, Rapanui.

Flow of water: Niuē, Maori, Moriori, Mota, Malay.

To swim: Motu.

To sail: Maori, Viti.

These several activities are exercised in earth, air, and water. The common factor is the swift motion. The means of motion cut no figure.

It is an invisible means in the driving of the wind, the flash of the meteor silent athwart the sky on its lethal errand, the slip and slide of the stream in its deep course, the set of the sea, the gliding of the canoe upon its surface.

Samoa, Tonga, and Efaté use the unduplicated stem and establish it firmly. Therefore the Arabic *tāra* is not acceptable despite its resemblance to the single Efaté form *tiri*, a dialectic mutation of *riri*.

355.

titiro, to gaze into the sea looking for fish or molluscs, to look at oneself in water or a mirror.

Samoa: *tilotilo*, to peep, to spy; *tio*, sharp looking (of the eyes). Nukuoro: *tiro*, to see. Tonga: *jio*, to look, to stare; *jiojio*, to gaze, to stare about; *fakajio*, to peep, to look, to stare, to spy, to pry; *kilo*, to look askant; *kikilo*, to look from side to side. Futuna: *tilo*, to gaze, to look with an optical instrument; *tiloika*, to watch for fish; *tiloata*, to look at oneself in any reflecting surface; *tio*, to see, to look at, to observe, to spy. Maori: *tiro*, to look, to look at; *tiro tiro*, to gaze around, to look about, to investigate. Tahiti: *titiromatatia*, to gaze, to look steadfastly, to cast a lustful look. Hawaii: *kilo*, to look earnestly at a thing; *kilokilo*, to examine carefully; *hookilo*, to spy. Mangaia: *tiro*, to look. Rapanui: *titiro*, to admire. Atiu: *titiro*, to look at. Marquesas: *tiohi*, id. Mangareva: *tiho*, to examine, to regard attentively; *matiro*, to examine. Manahiki: *titi tiro*, to see. Fotuna: *jironga*, a looking-glass.

Viti: *tirova*, to look at oneself in water, to peep at; *titiro*, a viewing indistinctly.

Buka: *tara*, *tarra*, to see. Santo: *titiro*, a looking-glass. Mota: *tiro*, clear; *tironin*, to look into a pool or mirror.

Macassar: *tiro*, to spy. Malagasy: *taratra*, *tarafina*, to look, to gaze. Arabic: *na'ara*, to gaze, to look for, to consider, to spy.

Polynesian discloses three stems here, *tio*, *tilo*, and *kilo*. The *kilo* form is found in Tonga only, for Hawaii *kilo* is the kappation of *tilo* and *kilo* would have passed into the northern speech as *ilo* under its normal loss of the true *k*. *Tilo* has a Proto-Samoan stem **tilof**, sufficient to preclude the inclusion in this series of the open *ilo*, *iloa*, to see, to know. *Tio* has a Proto-Samoan stem **tiof**, therefore it is well established as a derivative of **tilof**, although the process of internal loss is quite rare in Polynesian except when a letter is wholly discarded regardless of position. The Tongan vocabulary shows no protected form of *kilo* whereby we might determine its earlier stem. The sense of looking at oneself in water or in the lately introduced mirror is found in Samoa, Futuna, Viti, Fotuna, Efaté, Santo, and Mota.

Though scanty, our Melanesian and Indonesian identifications are satisfactory.

The Arabic stems in **ntr**, the Polynesian in **trf**, and these are by no means in accord.

356.

tōa, tōwa, tō', a domestic fowl, a bird.Moiki: *toa*, a fowl. Samoa: *toa*, a cock. Rapanui: *moa, toa*, id. Viti: *toa*, a fowl.Sesake, Epi, Arag, Mota, Malo, Marina, Gog, Omba: *toa*, a fowl. Ambrym, Malekula, Lakon, Norbarbar, Pak, Sasar, Vuras, Mosin, Alo Teqel, Motlav, Lo: *to*, id. Ulawa, Fagani, Bululaha, Alite, Wango, Saa: *kua*, id. Santo: *toa*, a bird. Baki: *ju*, a fowl. Bierian: *so*, id.Malay: *ayam*, a bird. Ceram: *tofi, towim*, id. Buru: *tehui, teput*, id.

Hebrew: 'ōf, bird. Arabic: 'a'f, a fowl.

The solitary instance in Polynesian of *toa* a fowl in place of the common *moa* is in Moiki, an island of the western verge. This is balanced by Rotumā *moa* a cock. Of the Viti *toa* Hazlewood makes the note "*a vosa maivei beka na toa*—where in the world does this word *toa* come from?" As *toa* and *to* the word is abundantly established in the New Hebrides, a sufficient answer to this question. Bierian *so* may be regarded as a *to*-derivative, and Baki *ju* argues a *tu* variant of *to*. This suggest a *tua*, from which we might derive *kua* in the Solomon Islands; unfortunately the *t-k* mutation, though common enough elsewhere, finds little confirmation in these languages.

Not one of the Indonesian identifications seems to bear any relation to *toa*.

Dr. Macdonald would have found his task easier if he had essayed to prove Dame Partlet of Rotumā a mother in Israel, for in that language the hen is *uof*. Certainly his Semitic offerings suggest no kinship with *toa*.

357.

toko, to rest, to sit down, to dwell, to remain, to be.Samoa: *to'a*, to subside, to settle down, to coagulate. Uvea: *toka*, to fall; *totoka*, to coagulate, to curdle. Tonga: *toka*, to lie down, to be, sediment. Futuna: *toka*, to fall, to lie down. Niue: *toka*, to remain. Maori: *totoka*, to congeal.Viti: *tiko*, to sit, to be (of persons); *toka*, to stand, to be placed (chiefly of things inanimate); *toka levu*, to sit with arms and legs abroad as one in pain.Mota: *toga*, to abide. Volow: *tonga*, id. Arag: *dogo*, to sit. Sesake: *toko, ndoko*, id. Nifilole: *togoli*, id. Mosin: *toga*, to abide; *tog*, to stay with. Fagani: 'oga, to stay. Pak: 'o, 'oga, to abide. Wango: 'o'a, to stay. Merlav, Lo: *tog*, to abide. Gog: *tog*, to live at. Vuras, Marina: *tog*, to stay. Maewo: *tog*, to sit; *togana, togaana*, a sitting. Norbarbar, Ugi: *to*, to stay. Nggela: *to*, to sit. Retan: *ta*, to stay. Sesake: *to, ndo*, to be, to abide, to sit. Ambrym: *dro, dru*, to abide; *ro*, to sit, to stay, to remain.Malay, Java: *dodok, duduk*, to sit, to be. Malagasy: *tuatra*, id.Hebrew: *takah*, to sit, to remain.

We find the word limited by Nuclear Polynesia and the direct migration thence to New Zealand.

Our Melanesian identifications are so abundant that it has been possible to arrange them in a very satisfactory chain of form development, and the several threads of meaning interlace and bind the whole.

The Malay and Java identifications are satisfactory; the Malagasy, in the absence of transition phases, somewhat less so.

The Hebrew is a resemblance.

358.

tu, tsu, su, ru, to stand, to abide, to dwell, to be; **tu-ri**, to stand, to abide with; **tu-raki**, to stand or abide for.

Samoa: *tu*, to stand, to arise; *tūla*, a locality or habitat; *tūla*, a pigeon perch; *tula'i*, *tutula'i*, to rise up, to stand up. Nuguria: *tu*, to stand. Tonga: *tuu*, to stand, to rise; *tuula*, a bird roost. Rapanui: *hakatuu*, to erect, to build. Futuna: *tuù*, to stand, to arise, to be situated or placed; *tuùlangu*, post, station, place of residence; *tuùlaki*, to arise, to stand up. Niue: *tu*, *tutu*, to stand; *tuulupou*, ground plates of a house. Uvea: *tutuu*, *tuulaki*, to stand; *tuu*, to arise. Nukuoro, Fotuna: *tu*, to stand. Moiki: *tu*, to stand, to abide. Maori: *tu*, to stand; *tunga*, a standing place; *turanga*, time, place or circumstance of standing. Tahiti: *tu*, to stand erect, upright. Rarotonga: *tu*, to stand, to arise. Marquesas: *tu*, to stand, to remain fixed. Mangareva: *tu*, being, essential, to be the essence of, to be upright, to stand up; *turanga*, a site, standing place. Hawaii: *ku*, to arise, to stand erect; *kulana*, a place in a fort where the men stand to throw their spears; *kulanahale*, a village. Viti: *tu*, to arise, to stand, to be; *tura*, *vakatura*, *viritu*, to cause to stand, to place; *tutu*, a stand, a place or thing to stand on.

Tangoan Santo, Malo, Duke of York, Raluana: *turu*, to stand. Nggela: *tuguru*, id. Maewo: *tura*, id. Fagani, Wango: *'ura*, id. Saa: *'ure*, id. Marina: *turi*, id. Mota, Vuras, Merlav, Gog, Pala, Baravon: *tur*, id. Lambell: *itūr*, id.; *kamtūr*, to stand up. Lamassa: *itūr*, to stand; *kaptūr*, to stand up. King: *itūr*, to stand; *ikatutūr*, to stand up. Matupit: *tut*, to arise; *wa-tut-pa*, to make to rise. Vaturanga, Deni, Sesake, Lo, Omba, Maewo: *tu*, to stand. Malekula: *tu*, *tutu*, id. Motu: *tutuka-tutuka*, to stand firm, to be steady. Sesake: *ndu*, to stand. Retan: *tir*, id. Tanna: *(t)utul*, id. Baki: *jumolu*, id. Bierian: *mtumau*, id. Volow: *tig*, id. Norbarbar: *tì*, id.

Malay: *diri*, to stand; *kukuh*, stable, firm. Malagasy: *juru*, id. Hebrew: *nasa'*, *so'*, *s'et*, to stand. Ethiopic: *nasa'a*, id. Arabic: *nas'a'*, id.

Exactly at this point a note is proper as to the substantive verb, for one of its most frequent substitutes is the sit of the preceding item, the other is the stand of the present item. To the Polynesian and to the Melanesian has come no concept of bare existence; he sees no need to say of himself "I am," always "I am doing," "I am suffering." It is hard for the stranger of alien culture to relinquish his nude idea of existence and to adopt the island idea; it is far more difficult to acquire the feeling of the language

and to accomplish elegance in the diction under these unfamiliar conditions. Take for an illustrative example these two sentences from the Viti:

Sa tiko na tamata e kila: there are (sit) men who know.

Sa tu mai vale na yau: the goods are (stand) in the house.

The use of *tu* for *tiko* and of *tiko* for *tu* would not produce incomprehensibility, but it would entail a loss of finish in diction, it would stamp the speaker as vulgar, as a white man.

Again there is a use of these verbs as auxiliaries to some principal verb in a fashion that is yet more difficult to grasp. *Sa lako tu* and *sa lako tiko*, both "he is going." But *sa lako tu* suggests "he is going here in plain sight"; and *sa lako tiko* "he go-sits," to employ a barbarism in a speech of culture representative of an elegance in a barbaric speech, produces the sense "he is going steadily on and on."

Savage life is far too complex; it is only in rich civilization that we can rise to the simplicity of elemental concepts.

The Proto-Samoan stem is **tul**.

In Polynesia the only variant is Hawaii *ku*, the common kappation.

In Melanesia our identifications fall into groups as representing *tul*, *tu*, *tutu*, and *til*. *Turu*, *tura*, *'ura*, *turi*, *'uri*, *tur* are the representatives of the *tul* group, and probably to be associated with this is Tanna *tutul*. *Tu*, the common Polynesian type, is found in Melanesia at scattered points, Efaté, Vaturanga, Deni, Sesake, Lo, Omba, Maewo, and Malekula; and the two Epi forms, Baki *jumolu* and Bierian *mtumau*, seem to be *tu*-composites. *Tutu*, the normal duplication, is found only in Malekula; Motu has a *tutuka*, a *tutu* enlarged and then duplicated in a manner which a true Polynesian would never tolerate. An interesting form is Matupit *tut*, *tu* duplicated and then abraded. The stem with vowel change, *til*, occurs but three times and in a very narrowly restricted area of two small islands in the north of the Banks Group. Retan *tir* is clearly the simple stem and Norbarbar *ti* stands to *til* as *tu* to *tul*. But Volow *tig* is anomalous; the same anomaly is found in Nggela *tuguru*.

We have but two Indonesian identifications. Malagasy *juru* is of the more usual type; Malay *diri* reestablishes the *til* stem just under discussion. It is uncertain whether the kappation is sufficiently well established in Malay to cover *kukuh* as a *tutu* equivalent.

The Semitic offered here, **ns'** stem, can have no relationship with *tul* or *til*.

359.

turua, full of holes (as a rock through which water percolates); **tuturu**, to drip (as eaves), to leak (of a roof); **tuturu**, a drop, dripping; **turu-ki**, to drip or leak through; **tirikit**, to begin to drop or spatter (of rain).

Samoa: *tutulu*, to leak (of a roof), to weep (language of ceremony); *tutululu*, the eaves of a house; *fa'atutululu*, to cause to drop; *tului*, to drop a thing into; *tuluva'o*, the drops from the trees after rain. Tonga: *tutululu*, to drop, to drip, to let in water, the eaves; *tutulu*, to fall in drops, leaky; *tuluta*, a single drop, a tear; *mokulu*, to fall as tears; *tului*, to drop into the eye or into a wound. Futuna: *tutulu*, to fall drop by drop; *tului*,

to drop into the eye or into a wound; *tulu*, *tulutulu*, to drip; *tulutulu*, the eaves. Nukuoro: *turuturu*, to fall in drops: *hakatulu*, to pour out. Fotuna: *turu*, to leak, to drip. Maori: *tuturu*, to leak, to drip; *maturuturu*, to fall in drops, to distil. Rapanui: *turu*, to flow, to drip. Tahiti: *tuturu*, to drop, as rain from a roof. Hawaii: *kulu*, a drop, to drop, to leak. Viti: *turu*, the eaves; *turu*, *tuturu*, *tiri*, *titiri*, a drop, to drop; *turuva*, *tiriva*, to drop upon. Motu: *hetuturu*, to drop (as water). Malekula: *tuuritur*, to leak, to drip. Malo: *tutue*, id. Baki: *mbari-drudruli*, id. Mota: *tir*, to drip, to drop. Malay: *jurus*, to water, to irrigate. Arabic: *s'alla*, to sew, to shed tears; *s'als'ala*, to drip, to fall in drops; *was'ala*, to drip, to drop, to leak out.

The Proto-Samoan stem is **tulu**.

This is well established by the recurrence of *tului* in which the verb-formative *i* is, as always, added to the stem and avails to preserve a final radical consonant if the stem is a closed one. This leaves the *v* in Viti *turuva*, *tiriva*, non-radical but to be explained in the constructive local usage of that speech.

The vowel change *u-i*, found slightly in 358, here occurs in Viti, Efaté, and Mota. A similar change affecting the weak unaccented final vowel gives us a *turi* stem in Malekula, *ture* in Malo, and the Baki composite is *tuli* with a reinforcement of the initial mute. In Efaté *tirikiti*, *tiri* compounds with *kit* (149) small.

The Malay *jurus*, accepting the common *t-j* mutation and assuming that the final *s* has the appropriate construction value, suggests kinship with *turu*; but we can not definitely accept the identification on such slight data as against the considerable variation in sense.

The Semitic and the island tongues have an *l* in common, far too little on which to build an argument.

360.

ua, ueti, böua, fruit.

Samoa, Tonga, Futuna, Niuë, Uvea, Fotuna, Moiki: *fua*, fruit. Sika-yana: *fua*, an egg. Nuguria: *hua*, fruit, egg; *te hua te rakau*, blossom. Maori, Hawaii, Nukuoro: *hua*, fruit. Aniwa: *no-hua*, id. Rapanui: *huaà*, fruit, to bloom, to blossom. Rarotonga: *ua*, id.

Viti: *vua*, fruit. Rotumā: *hue*, id.

Moānus: *mbūa*, fruit. Eromanga: *buwa*, id. Uni, Pokau: *vua*, id. Alite, Nggela: *vuavua*, id. Pokau: *vuavua*, flower. Kabadi: *ovaovana*, id. Rubi: *o-wuawua*, id. Vaturanga: *vuvua*, fruit. Baravon: *vuei*, to bear fruit. New Britain: *vue*, id. ¶Mekeo: *pua*, fruit. Hula, Keapara, Galoma: *bua*, id. Roro: *buana*, id. Rubi: *guagua*, id. Fagani: *fua*, id. Ulawa, Saa, Wango, Doura, Bululaha: *hua*, id. Motu: *huahua*, id. Aneityum: *howa*, id. Buka: *hoa*, id. Dobu, Taupota, Kubiri, Galavi: *ua*, id. Suau: *uaua*, id. Mukawa: *uwa*, id. Taupota,

Wedau, Awalama, Galavi: *iūwa*, id. Tubetube: *uwe*, id. Duke of York: *ua*, to bear fruit. Malekula Pangkumu: *mi uan*, fruit. Sesake: *wa*, id. Tanna: *nowa*, id. Nifilole: *nua*, id. Deni, Marina: *va*, id. Norbarbar: *wo*, id. Mota: *woai*,^f id. Arag, Omba, Duke of York: *wai*, id. Merlav, Gog, Motlav: *we*, id. Lakon: *wehi*, id. Mosin: *weegi*, id. Pak: *wewegi*, id. Sasar, Alo Teqel: *wowegi*, id. Volow: *wenen*, id. Lo: *win*, id. Vuras: *wie*, id. Ambrym: *ui*, id. Maewo: *oi*, id. Salibabo: *buwah*, fruit. Bugi: *buwa*, id. Malay: *buah*, id. Salayer, Menado, Borneo, Liang, Baju: *bua*, id. Amblaw, Sanguir: *buani*, id. Cajeli: *bulan*, id. Ahtiago: *uan*, id. Mayapo, Massaratty: *fuau*, id. Teor: *fuin*, id. Teluti, Wahai: *huan*, id. Morella: *hua*, id. Caimarian: *huwai*, id. Java: *woh*, id. Gah: *woya*, id. Aramaic: *fēra*, *fira*, to bear fruit. Hebrew: *pēri*, *para*, id.

With this stem we should collate *pua*, of cognate meaning.

Maori: *pua*, a flower, a seed, to blossom. Tahiti: *pua*, to blossom. Hawaii: *pua*, a flower, to blossom. Mangaia: *pua*, to blossom. Mangareva: *pua*, a flower, to bloom. Marquesas: *pua*, a flower, to blossom. Paumotu: *pua*, a flower.

We should also collate *funga* (246).

In Sesake we find the *funga* stem doing duty for blossom and for fruit. In Indonesia we find *funga* in the fruit sense in Sulu, Tagalog, Ilocan, Magindano, all Philippine tongues. This suffices to prove that *funga* and *fua* were by some regarded as sufficiently akin to allow the sense of *fua* to pass to *funga*.

So too of *pua* and *fua*. While the sense of *pua* is that of flowering, wherever it is found, the Maori is proof that it could have the *fua* fruit sense as well. So far as we can now discover *pua* is an open stem, but its occurrence is altogether in the Tongafiti area, a later stage of the language, so that this is not conclusive.

And *fua* itself is susceptible of both senses. This comes to the surface in Buka, where *hoa* is fruit and *ua* blossom. We find the confusion of meanings also in Samoa, Maori. There is reason to infer that the Proto-Samoan stem is *fuat*, but this does not necessarily militate against stem identity with *pua*.

The data are so assembled in the foregoing collation as to indicate the gradual deviation from the primal stem. The identity is found of considerable extent in Indonesia.

The Semitic forms proposed are clearly uncoordinate.

361.

uāngo, uāk, pig, swine; **bwakas, bwokas**, a pig (not boar or sow) specially reared and esteemed for its flesh.

Tonga: *buaka*, a pig. Futuna, Niuē, Uvea, Nukuoro, Vaté, Rarotonga, Mangareva: *puaka*, id. Rapanui: *puaka*, beast, animal, but not pig. Samoa: *pua'a*, a pig, swine, animals in general. Maori: *poaka*, a pig. Tahiti, Marquesas, Hawaii: *puaa*, id. Aniwa, Fotuna: *pakasi*, id.

- Viti: *vuaka*, vore, a pig. Rotumā: *puaka*, id.
 New Georgia: *boako*, pig. Lifu, Nengone: *puaka*, id. Tanna:
puka, a pig, to grunt. Epi Bierian: *bukahi*, a pig. Sesake:
bokasi, flesh. Eromanga: *mpokas*, a pig. Aneityum: *pigath*, id.
 Kabadi, Motu: *boroma*, id. Masig: *boromo*, id. Motu:
buruma, id. Kunini: *blome*, id. Miriam: *borom*, id. Mabuiag:
burum, id. Pokau: *boloma*, id. Uni: *buluma*, id. Sariba,
 Murua: *buruka*, id. Nada: *buruku*, id. Kiriwina: *bunuka*, id.
 Lambell, Lamassa, Baravon: *boroi*, id. King, Tavera, Awa-
 lama, Taupota, Wedau, Galavi, Boniki, Mukawa, Duke of York:
bóro, id. Nggela: *mbolo*, animal, beast, pig. Savo: *polo*, pig.
 Roro: *aiporo*, id. Kubiri, Raqa, Kiviri, Oiun: *foro*, id. Uni:
foloma, id. Bugotu: *botho*, id. Nggao: *bosu*, id. Pala:
bóre, id. Laur: *mbor*, id. Solomon Islands: *boa*, id. Tube-
 tube: *poalo*, id. Natalava: *boalo*, id. New Ireland (Carteret
 Harbor): *bouri*, id. Moánu: *póu*, id. Fagani: *boo*, id. New
 Ireland (Duffield): *bogh*, id. Alite: *bo*, id. Brierly Island,
 Tubetube, Tagula: *bobo*, id. Panaieti, Misima: *bobu*, id. Rua-
 vatu: *be*, id. Ugi, Ulawa, Wango, Bululaha: *po*, id. Malo:
boi, id. Marina, Nifilole: *poc*, id. Ambrym, Epi Baki:
bue, id. Deni: *mpoi*, id. Omba, Maewo: *kmbwoe*, id. Merlav:
kmpwoe, id. Arag, Mota: *kpwoc*, id. Motlav, Gog, Norbarbar:
kmbwo, id. Volow: *nggmbwo*, id. Alo Teqel: *kmpwo*, id. Pak,
 Sasar: *kbwo*, id. Lakon, Vuras, Mosin, Lo: *kpwoc*, id. Saa: *pwo*,
 id. Buka: *pūm*, *ngu*, *paum*, *apum*, id. Sesake: *wango*, id.
 Waigiou: *bo*, pig. Mysot: *boh*, id. Buru: *babue*, id. Malay:
babi, id.
 Arabic: *fūka*, *fūāk*, *fuwak*, to emit hoarse guttural sounds; *jakfaka*,
 to bark.

Both Pratt and Hazlewood, in the Samoan and Viti dictionaries respectively, credit *pua'a* and *vuaka* with derivation from and corruption of English pork. They little knew the extent of this ancient island word. To show that I am not alone in my view I cite Mr. Tregear's interesting note (Maori-Polynesian Comparative Dictionary, s. v. *poaka*):

This word (generally supposed to be a corruption of the English word *porker*) is genuine Polynesian. It was probably received by the Maoris from the Tahitian interpreter of Captain Cook, although the passage in Vol. ii, p. 372, of Cook's *Voyages*, ed. 1793, urges that the Maoris already knew the word. It is possible that the Maoris had kept a traditional knowledge of the animal, just as in some smaller Polynesian islands the natives called the dog *kuri* at sight, although the animal was not to be found amongst them. The hogs were numerous in Tahiti, Hawaii, etc., before the arrival of the Europeans, and the native hog appears to have been of a different species from the imported breed. In the Hervey Group pigs were found on Atiu and Rarotonga, but not on the neighboring islands of Mangaia and Aitutaki. However, at Mangaia, districts known as *pa-puaka* (hog-pen) and *puaka-ngunguru* (grunting hog) are names in evidence of the pig having once been known on the island.

In the Melanesian area we find at least three stems. Of one the full stem is *pakasi*, as found at Aniwa and Fotuna. Sesake *bokasi* and Bierian *bukahi* are but slight deviations therefrom. The first alteration is the

abrasion of the final vowel, yielding Eromanga *mpokas*, Efaté *bwakas* and *bwokas*; and Aneityum *pigath* derives from this stage. The second alteration is abrasion of the then final consonant yielding Tanna *puka'*. The Efaté *bwakas* affords the transition phase to the *puaka* type of Polynesia in general, which is found in Lifu and Nengone (yet possibly a direct introduction by Samoan missionaries) and in *boako* of New Georgia. Efaté *uango*, *uàk*, Sesake *wango*, derive from *puaka* by frontal abrasion and *k-ng* mutation.

The next stem is *boro*. In New Guinea we encounter *boro* with *m*-accretion, Kabadi *boroma*, Motu *buruma*, Miriam *borom*. As *boro* the stem is found in the eastern gateway, New Britain, Duke of York, New Ireland, in *boroi*, *boro*, *mbolo*, *polo*, *boalo*, *bouri*, *botho*, *bosu*, *mbor*.

The third stem is *po*. This appears in a wide range of forms. It is not beyond probability that *po* may be an attrition form of *boro*. The Laur *mbor*, in a district adjacent to *boro* forms, and the Solomon Island *boa* may provide transition phases leading to *po*.

The forms found in Buka are not susceptible of derivation from any of these three forms.

In Indonesia Waigiou *bo* and Mysot *boh* are satisfactorily identified with the Melanesian *po*-stem. The Malay *babi*, Buru *babue*, offers a difficulty. Codrington (Melanesian Languages, 86) offers Sanguir and Salibabo *bawi* as a transition to *boh* and *bo*.

The Semitic, *fk* stem, can not be brought into relationship with our primal *pakasi*.

362.

ula, a maggot.

Samoa, Futuna, Hawaii: *ilo*, a worm or maggot in putrid flesh or ulcers. Maori, Tahiti, Mangareva: *iro*, id. Fotuna: *eiro*, id.

Viti: *uloulo*, a maggot.

Motu: *uloulo*, a maggot. Mota, Malo: *ulo*, id. Baki: *ilo*, id. Malekula: *na-uru*, id.

Malay: *ulat*, a maggot. Malagasy: *ulitra*, id.

Ethiopic: *'es'e*, a worm; *'as'ya*, to breed worms.

The identifications are quite satisfactory, the *i-u* vowel change being well established. While the *ilo* forms are characteristically Polynesian and *ulo* characteristically Melanesian, Baki *ilo* is a Melanesian occurrence of the Polynesian form. The Efaté *ula* has the same vowel scheme as Malay *ulat*.

The Semitic forms have no possible relation to the island forms.

363.

uose, **uos**, **uohe**, an oar, a paddle.

Tonga: *fohe*, a paddle; *taufoe*, a rope belonging to the steer oar.

Niuë: *fohe*, a paddle. Samoa: *foe*, a paddle; *foefoe*, to paddle briskly. Futuna: *foe*, an oar, a paddle. Fotuna: *foi*, id.

Maori, Tahiti, Marquesas, Nukuoro, Nuguria, Rapanui, Tongarewa: *hoe*, a paddle, an oar, to row, to paddle. Mangareva:

hoe, id.; *ohe*, an oar, a paddle. Hawaii: *hoe*, a paddle; *hoehoe*, to row.

Viti: *vothe*, a paddle, to paddle.

King: *vóso*, a paddle. Epi: *voho*, id. Laur, Lamassa: *vös*, id. Malekula: *bos*, id. Suau: *vose*, id. Mugula: *wosi*, id. Sariba: *wosi*, *uose*, *woase*, id. Pokau: *vode*, id. Roro: *bote*, id. Mekeo: *poke*, id. Kabadi: *ode*, id. Solomon Islands: *jose*, id. New Ireland (Duffield): *fiss*, id. Buka: *hosse*, id. Motu: *hode*, id. Pala: *uása*, id. Mota: *wose*, id. Awalama, Taupota, Wedau, Galavi, Boniki: *voe*, id. Mukawa, Kubiri, Oiun: *boe*, id. Kiviri: *boi*, id. Raqa: *bol'e*, id. Tanna: *vea*, id. Aneityum: *ne-hev*, id. Visayas: *bugsai*, paddle. Malay: *dayung*, id. Malagasy: *fivui*, id. Arabic: *mikdaʿ*, *migdaʿ*, *mihdaʿ*, *mikdaʿ*, an oar. Amharic: *makzaʿ*, id. Arabic: *ʿaduf*, id.

The Proto-Samoan stem is **fohe**, as carried in Tonga and Niuë, and oddly seen in Mangareva *ohe*.

There is a certain agreement in these forms which compares very well with the truly remarkable showing of the material offered in item 280.

In Melanesia we have most commonly the forms in *s*. The nearest to the stem **fohe** is Solomon Islands *jose*, Mota *wose*, Efáté *uose*. A vowel change in the unaccented final syllable is shown in King *vóso*, Epi *voho*, at widely separated points. The *f-h* mutation from *jose* yields Buka *hosse*, and Motu *hode* shows still another change. Of the closed stem, an attrition form, we have *vös* in Laur and Lamassa, and Duffield's unspecified New Ireland vocabulary seems to draw from the same region for the form *fiss*. Makekula yields us *bos*, and Efáté *uos*. The Aneityum *ne-hev* is a metathesis of some such attrition form, *veh*. This makes it within the limit of possibility that Tanna *vea* may be included.

I can see no plan whereby Visayas *bugsai* can account for its inner palatal and therefore become identifiable, and the other Indonesian forms are hopelessly remote.

The Semitic offers no resemblance at all.

364.

ura, lobster, prawn.

Samoa: *ula*, lobster, prawn, shrimp, crayfish. Futuna: *ùla*, lobster. Rapanui, Nukuoro: *ura*, prawn, lobster. Mangareva: *ura*, crayfish. Maori: *koura*, id. Paumotu: cf. *koranihi*, prawn. Marquesas: *koua*, crayfish. Tahiti: *oura*, prawn. Tonga: *uo*, lobster. Niuë: *uo*, crayfish.

Viti: *ura*, prawn.

Mota, Motu: *ura*, crayfish. Malekula: *na-uru*, id. Bierian: *ni-ua*, id. Baki: *ilo*, id.

Java: *urang*, crayfish. Malagasy: *urana*, id. (*uranurana*, eating greedily). Malay: *udang*, crayfish.

Hebrew: *hawar*, to be white, to become pale. Arabic: *hara*, to be bleached, to eat greedily; *hawar'*, *haur*, red leather.

Nuclear Polynesia has the simple stem *ula*; the languages of the Tonga-fiti migration have a composite *koula*, except that Mangareva has the Proto-Samoan form. Niuë and Tonga have a secondary form *uo*, not to be considered the ordinary elision of the liquid, for both these languages make free use of *l*; this secondary form is discoverable in Bierian.

The Melanesian identifications are satisfactory, Baki *ilo* exhibiting the same vowel change as in 362.

The three Indonesian identifications agree in the accretion of a nasal and are satisfactory.

There is nothing in form and nothing in signification in this Semitic to afford suspicion of relationship with *ula*.

365.

uti na, the penis.

Viti: *uti*, id.

New Guinea (Astrolabe Bay); *uti*, id.

Another root form is quite similar in the same sense and is adjoined for comparison.

Samoa, Tonga, Niuē, Nuguria, Hawaii: *ule*, the penis. Maori, Tahiti, Mangareva, Paumotu: *ure*, id.

Motu: *use*, id. New Ireland (Port Praslin): *usik*, id. New Ireland (Carteret Harbor): *ausidi*, id. Pala: *us*, id. Lamotrek: *ul*, id.

Arabic: 'uss', id.

We have here forms in *l*, *s*, *t*. In the table of mutations we find very scanty evidence of *l-t* mutation, but none at all of *l-s*. Starting from *s* we find very scanty evidence of *s-t* mutation, none at all of *s-l* (*s-r* resting on one unsatisfactory instance). Starting from *t* we find considerable proof of *t-s* mutation, and, while *t-l* does not appear, the similar *t-r* is found in a few cases (see note 258).

It is, therefore, just possible if we regard *uti* as the parent form, to make a plea for the derivation of *use* and *ule* therefrom. Apart from the fact that our evidence in support is scanty, we find yet another difficulty. We should be put in the position of finding in the Proto-Samoan a secondary form, yet in all our material we have found that to be the primary form and the Melanesian secondary or loan material. We are not warranted, therefore, in accepting this identification.

Not having anything in particular with which to identify it, the mere presence of the Semitic here offered cuts no figure.

APPENDIX II.

THE SOUTHERN GATEWAY.

After the compilation of data and completion of the discussion thereof in the foregoing work a few additional vocabularies became accessible. The data collated therefrom have been incorporated in the proper places in Appendix I, but it was found impracticable to make use thereof in the several items of discussion. To remedy this omission the necessary check-lists are here offered, together with such investigation of this added material as seems advisable or likely to prove of interest.

Two of the items of additional material belong on the Polynesian side of this inquiry, the vocabularies of Nuguria and Rapanui, one the most distant of the islands of the Polynesian verge measured backward along the migration track, the other the last outpost of Polynesian migration in the Pacific. The following check-lists will afford access to this material. The use of bold-face type serves to distinguish the vocables which are exclusively Proto-Samoan, those noted in the common type being vocables common to the two migration streams; a single instance in the Rapanui list is set off by italic numerals as exclusively Tongafiti.

Nuguria.	54	58	61	62	63	64	72	73	78	81	89	91	98	103
	106	113	123	125	126	140	141	142	146	147	149	150	151	153
	154	156	158	159	164	167	168	173	187	190	198	201	206	208
	209	211	212	215	216	217	219	223	237	239	250	252	253	256
	259	261	263	266	269	271	272	274	275	276	277	278	279	281
	282	283	285	286	290	291	292	294	295	297	298	300	301	307
	308	309	312	315	316	317	318	319	321	322	323	324	325	327
	328	329	330	333	335	336	338	339	340	342	343	344	345	346
	350	352	354	358	360	363	365							
Rapanui.	24	54	58	61	64	73	75	76	80	81	94	103	106	107
	113	118	119	120	122	125	126	128	132	133	135	137	141	142
	143	144	146	148	149	151	153	154	158	159	160	164	166	167
	168	171	183	184	187	196	197	198	201	205	206	207	208	209
	210	211	212	213	214	215	216	218	222	228	229	230	233	234
	238	239	240	241	253	256	258	259	261	263	264	266	267	269
	270	271	272	273	274	275	276	278	281	282	284	285	287	288
	289	290	291	292	293	295	296	297	298	300	301	302	304	305
	306	307	308	312	313	316	317	318	319	320	321	322	323	324
	325	326	327	330	332	333	335	336	338	339	342	343	<i>344</i>	346
	347	350	351	352	353	354	355	356	358	359	360	361	363	364

We shall next examine each of these Polynesian languages for the discovery of their mutations from the standard of the Proto-Samoan.

The vocabulary of Nuguria, collected by Dr. Thilenius, is probably not standardized as would have been the case if we owed it to some resident collector. Accordingly we may attach no particular importance to the fact that *l* and *r* seem to be used with equal frequency, that **f-f** is almost as frequent as **f-h**. In these lists it has been deemed unnecessary to indicate the data upon which rest the more positively established mutations.

a-o 61, 256	e-i 62	o-a 201	u-i 125
h— 206, 215, 278			
s-s ng-n	f-f	k-g 113	p-p
s-h n-ng 259	f-h	k— 156	p-b 103, 285
	f-v 91		

Aspiration assumed 159, 275.

The Rapanui speech diverges from Proto-Samoan in the loss of the true aspirate, the mutation of the sibilant to an aspirate, and the mutation of *f* to *h*. The irregular variants are as follows:

a-o 61, 233	i-u 321	o-a 137	u-a 125
l-r l-l 141	l-n 154	l— 103, 128	u-o 168
ng-ng	ng-n 125	m-p 141	

Aspiration assumed 158, 270.

Rapanui differs markedly in its speech from other languages of eastern Polynesia. It carries a far larger element of distinctly Proto-Samoan material; at the same time it has also a distinctly Tongafiti element, only one item of the latter, however, being involved in the material here assembled. The tradition is clear that Rapanui was peopled by a migrant race, said to have come from a land in the east where periodical droughts killed the vegetation, and since the time of the settler king there have been 56 successors. The eastern home is incomprehensible; nothing intervenes between Rapanui and the coast of Chili and Peru in that direction, and nothing in the ethnography of the races there found can be brought into association with the Polynesians of this outlying colony of the South Sea. Nor does this tradition fall into accord with the belief, supported by such evidence as may exist in geographical names, that Rapanui, Great Rapa, was settled from Rapaiti or Rapa the Less. The date of settlement by reduction of the royal line counting four to the century is established at 500 A. D. This antedates by a considerable period the arrival of the Tongafiti migration in the Pacific. The Tongafiti speech element is proof that the Rapanui settlement must have followed the expulsion of the Tongafiti from Nuclear Polynesia, an event which we have satisfactorily established as synchronous with the Norman Conquest. The traditional date, therefore, is wholly untrustworthy. The presence of the remarkably large Proto-Samoan content in the speech is clear evidence that in the place whence the Rapanui colonists emigrated the two migration swarms were intermingled in peaceful association. No island is now discoverable where the language contains the like proportions of distinctively Proto-Samoan and distinctively Tongafiti elements. The only conclusion permissible is that Rapanui was peopled by a migration in which the two race elements were evenly mixed, therefore a secondary migration from some point of contact of the two migrations.

The remainder of this added material bears with considerable insistence upon the station of Motu, which in the foregoing discussion has served as the ultimate point in establishment of the Viti Stream of Proto-Samoan migration. It is, accordingly, well worth the apparatus of check-lists and phonetic tables here assembled, the material being associable with that presented and discussed in Chapter VII.

Awalama	46	74	190	199	217	239	247	254	258	259	265	272	276	290
	297	298	300	306	317	321	324	328	330	336	339	340	350	360
	361	363												
Boniki	46	74	187	190	199	217	225	239	249	254	259	265	272	273
	290	300	302	312	313	321	324	328	339	344	350	351	361	363
Dobu	46	47	74	190	199	207	214	217	239	249	258	276	278	285
	290	297	300	302	306	308	309	313	317	318	321	324	328	329
	330	339	342	344	350	360								
Domara	312													
Doura	74	217	249	259	265	272	284	291	306	309	312	313	318	324
	330	342	350	360										
Duba	324													
Galavi	46	74	149	199	217	225	239	249	254	259	265	272	273	282
	290	297	312	313	321	324	328	339	340	344	350	360	361	363
Galoma	46	47	74	109	122	149	187	190	206	217	247	249	254	265
	276	284	285	290	291	292	294	298	306	308	312	313	317	321
	324	328	330	334	335	346	351	360						
Hula	46	47	74	109	122	149	187	190	214	217	247	249	265	276
	290	291	292	294	298	306	308	312	313	317	321	324	328	330
	334	335	340	346	349	351	360							
Kabadi	46	47	59	74	122	149	214	247	249	254	258	259	265	266
	272	290	291	292	294	298	300	308	309	312	313	317	321	324
	330	335	336	350	351	360	361	363						
Keakalo	312	338												
Keapara	46	47	74	122	149	187	190	206	214	217	247	249	254	265
	272	284	285	290	291	292	294	297	298	306	308	312	313	317
	321	324	328	330	334	335	346	349	351	360				
Kiriwina	47	74	109	149	187	190	212	214	217	225	239	273	276	285
	290	291	294	300	302	306	308	309	312	313	317	318	321	324
	328	329	330	339	340	344	350	361						
Kiviri	59	74	190	199	217	225	249	278	282	285	297	300	306	312
	313	321	324	328	330	339	340	344	350	351	361	363		
Kiwai	340													
Koita	217													
Koko-Yimidir	340													
Kubiri	74	217	225	249	278	282	300	302	306	312	313	316	317	321
	324	328	330	339	340	344	351	360	361	363				
Kunini	361													
Kwagila	190	291	297	313	324	330	350							
Mabuiag	46	76	218	340	344	361								
Mailu	312													
Masig	361													
Massim	268	291	318											
Mekeo	46	74	109	190	206	207	214	217	247	254	259	272	276	290
	292	294	306	309	312	313	318	321	324	328	335	336	339	342
	350	360	363											
Miriam	64	76	361	(Murray Island, page 99)										
Misima	47	109	190	199	217	247	259	291	297	308	312	321	324	328
	330	342	350	351	361									
Mugula	190	199	212	247	290	291	294	298	313	324	330	340	344	350
	363													
Mukawa	46	74	190	199	206	217	225	239	247	249	259	273	276	285
	298	300	302	306	312	313	316	317	324	328	330	335	336	339
	340	344	350	351	360	361	363							
Murua	149	190	199	217	239	247	273	276	285	290	291	300	302	306
	308	309	312	317	318	321	324	328	339	350	361			
Nada	109	149	190	199	212	217	225	239	247	273	276	290	291	302
	306	308	309	312	313	317	318	324	328	330	333	339	340	342
	344	350	351	361										
Oiun	59	74	149	187	190	199	217	225	249	258	282	297	298	306
	313	317	321	324	336	339	340	344	350	361				
Panaiet	47	74	109	190	214	217	225	239	247	249	259	291	292	308
	309	312	313	321	324	328	330	350	361					
Pokau	46	59	74	109	122	149	190	206	207	214	217	247	249	258
	259	265	273	284	285	291	292	298	306	308	309	312	313	317
	321	324	330	339	340	346	350	351	360	361	363			

[illegible]

We shall next develop the phonetic variety of these languages in a series of tables such as we have employed for other Melanesian speech in Chapter VII.

AWALAMA.

				a	<i>a, i, o</i>				
				e	<i>e</i>			o	<i>o</i>
		i	<i>i, a, e, o</i>				u	<i>u, o</i>	
				l	<i>l, r, n</i>				
	ng	<i>n, g, m</i>		n	<i>n, g, h</i>			m	<i>m</i>
				h	<i>t, —</i>				
				s	<i>h, —</i>				
							v	<i>g</i>	
							f	<i>v, w</i>	
	k	<i>h, —</i>		t	<i>t, d, h, —</i>		p	<i>p, b</i>	
a-a	46, 74, 199, 217, 239, 258, 265, 276, 290, 300, 317, 324, 339, 350, 360		k-h	297			k—	46, 258, 306	
a-i	328		n-n	46, 74, 259, 290, 317, 330			n-g	254	
a-o	199, 258, 291		n-h	328			h-t	339	
e-e	190, 276, 290, 363		h—	363			s-h	239	
i-i	46, 259, 290, 291, 298, 300, 350		s—	298			t-t	74, 199, 258, 306, 324, 350	
i-a	254		t-d	276			t-h	247	
i-e	254, 330		t—	217			m-m	217, 258, 265, 317, 321, 324, 328	
i-o	254		v-g	291			f-v	363	
o-o	247, 259, 336, 363		f-w	254, 259, 290, 360			p-p	190	
u-u	74, 239, 247, 258, 265, 298, 306, 317, 321, 330, 360		p-b	247					
u-o	328								
l-l	339								
l-r	297								
l-n	265, 336, 350								
ng-n	336								
ng-g	350								
ng-m	199								

Identical 317, 324

Vowel identity 46, 217, 265

Consonant mutation:

Vowel identity 239, 259, 276, 290, 306, 350, 363

Frontal abrasion 46, 306, 321

Frontal accretion 190, 239, 298, 360

Terminal accretion 190, 247, 254, 300, 321, 330, 336, 339

Metathesis 360

BONIKI.

				a	<i>a, e, i, o</i>	
			e	<i>e, a, u</i>	o	<i>o, e</i>
		i	<i>i, a, o</i>		u	<i>u, o</i>
ng	<i>n, m</i>			n	<i>n, k, —</i>	m <i>m</i>
				l	<i>l, n, —</i>	
				h		
				s	<i>s, —</i>	
						v
						f <i>v, w, p, k</i>
						p <i>b</i>
	k <i>k</i>			t	<i>t, m</i>	
a-a	46, 74, 199, 217, 239, 265, 290, 300, 312, 324, 328, 351	l-n	265	l—	312, 350	
a-e	350	ng-n	350	ng-m	199	
a-i	350	k-k	46, 225, 249, 351	n-n	46, 74, 187, 290, 328, 351	
a-o	199	n-k	254	n—	259	
e-e	190, 290, 363	s-s	344	s—	239	
e-a	190, 249, 272	t-t	74, 199, 249, 302, 324, 350	t-m	217	
e-u	187	m-m	217, 265, 312, 321, 324, 328	f-v	254, 273, 290, 363	
i-i	46, 249, 273, 290, 300, 312, 350	f-w	290	f-p	193	
i-a	254	f-k	259	p-b	193	
i-o	259					
o-o	187, 363					
o-e	259					
u-u	74, 239, 265, 272, 273, 302, 321, 344, 350					
u-o	328					
l-l	225, 272					

Identical. 46, 74, 324, 344, 351

Consonant identity. 249, 328

Vowel identity. 217, 239, 265, 273

Consonant mutation:

Vowel identity. 290, 363

Frontal abrasion. 259, 321

Frontal accretion. 187, 239, 273, 302

Terminal accretion. 217, 225, 249, 272, 300, 302, 321

DOBU.

	a <i>a, e, o</i>	
	e <i>e, a</i>	o <i>o, e</i>
i <i>i</i>		u <i>u, a</i>
	l <i>l, r, n, —</i>	
ng <i>n, g, m, —</i>	n <i>n</i>	m <i>m</i>
	h <i>s</i>	
	s <i>s</i>	
		v
		f <i>w, s, —</i>
k <i>g, s, —</i>	t <i>t, d, s, —</i>	p <i>p, b</i>

a-a	46, 74, 199, 207, 214, 239, 258, 276, 278, 290, 300, 308, 313, 317, 318, 324, 342, 360	ng—	285
a-e	309, 328, 350	k-g	302
a-o	302	k-s	297
e-e	190, 276, 290	k—	46, 249, 258, 306
e-a	47, 249, 318	n-n	74, 290, 317, 318, 321, 324, 328
i-i	46, 47, 249, 285, 290, 300, 302, 308, 313, 329, 330, 342	h-s	47, 278
o-o	285	s-s	239, 342, 344
o-e	309	t-t	47, 74, 199, 207, 249, 258, 276, 306, 324, 350
u-u	74, 207, 239, 258, 278, 306, 317, 321, 329, 330, 344, 360	t-d	329
u-a	328	t-s	318
l-l	308	t—	302
l-r	297	m-m	258, 313, 317, 318, 321, 324, 328
l-n	309, 313	f-w	290
l—	350	f-s	290
ng-n	309, 350	f—	214, 290, 329, 360
ng-g	308	p-p	190
ng-m	199	p-b	207, 285

Identical. 74, 190, 239, 276, 317, 324, 330, 342, 344

Consonant identity. . . . 328

Vowel identity. 46, 329, 360

Consonant mutation:

Vowel identity. 199, 207, 278, 290, 306, 313

Frontal abrasion. 46, 214, 249, 306

Frontal accession. 46

Terminal accession. . . . 190, 278, 300, 317, 342

Metathesis. 308

DOMARA.

a-a	312	l—	312
i-i	312	m-m	312

DOURA.

	a	<i>a, e</i>	
	e	<i>a</i>	o <i>e</i>
	i <i>i</i>		u <i>u</i>
ng—	l	<i>l, r, i, —</i>	
	n	<i>n, —</i>	m <i>m</i>
	h		
	s	<i>d</i>	
k—	t	<i>k</i>	v <i>v</i>
			f <i>h, k</i>
			p <i>h</i>

a-a	74, 217, 265, 284, 309, 312, 313, 318, 324, 342, 350, 360	ng—	309, 350
a-e	291	k—	249, 306
e-a	249, 272, 318	n-n	74, 330, 342
i-i	249, 259, 291, 312, 313, 330, 342, 350	n—	259
o-e	259, 309	s-d	342
u-u	74, 265, 272, 284, 306, 330, 360	t-k	74, 217, 249, 306, 318, 324, 350
l-l	309	m-m	217, 265, 312, 313, 318, 324
l-r	265, 272	v-v	291
l-i	284, 309	f-h	272, 360
l—	312, 313, 350	f-k	259
		p-h	284

Identical. 265, 330

Consonant mutation:

Vowel identity. 74, 217, 306, 318, 324, 342, 360

Frontal abrasion. 249, 259, 306

Terminal accretion. 249

DUBA.

a-a	324	t-t	324
m-m	324		

GALAVI.

		a	<i>a, e, i, o</i>	
	e	<i>a, e</i>	o	<i>o, e</i>
	i	<i>i, a, o</i>	u	<i>u, o</i>
		l	<i>l, r, n, —</i>	
ng	<i>n, m</i>	n	<i>n, k, —</i>	m <i>m</i>
		h	<i>g</i>	
		s	<i>s</i>	
				v
				f <i>v, w, p, k, —</i>
	k <i>k, g</i>	t	<i>t, m</i>	p

a-a	46, 74, 199, 217, 239, 265, 290, 312, 313, 324, 328, 340, 360, 363	l—	313, 350
a-e	350	ng-n	350
a-i	350	ng-m	199
a-o	199	k-k	46, 149, 249
e-e	290, 363	k-g	225, 297
e-a	249, 272	n-n	46, 74, 290, 328
i-i	46, 149, 225, 249, 273, 290, 312, 313, 350	n-k	254
i-a	254	n—	259
i-o	259	h-g	340
o-o	282	s-s	239, 344
o-e	259	t-t	74, 199, 249, 324, 350
u-u	74, 239, 265, 272, 273, 282, 321, 344, 360	t-m	217
u-o	328	m-m	217, 265, 312, 313, 321, 324, 328, 340
l-l	272	f-v	254, 273, 282, 290
l-r	225, 297	f-w	290, 360, 363
l-n	265, 312, 313	f-p	272
		f-k	259
		f—	360

Identical 46, 74, 149, 239, 324, 344

Consonant identity . . . 249, 328

Vowel identity 217, 265, 273, 360

Consonant mutation:

Vowel identity 225, 290, 312, 313, 363

Frontal abrasion 321

Frontal accretion 149, 239, 273, 360

Terminal accretion 149, 217, 225, 249, 254, 272, 321, 340

Metathesis 360

GALOMA.

			a <i>a, e</i>	
		e <i>e, a</i>	o <i>o</i>	
	i <i>i</i>		u <i>u, i, o</i>	
		l <i>l, r, g, n, —</i>		
ng <i>g</i>		n <i>n, g</i>	m <i>m</i>	
		h <i>r</i>		
		s <i>r</i>		
			v <i>b, w</i>	
			f <i>p, b</i>	
	k <i>g, —</i>	t <i>l, —</i>	p <i>p, b</i>	
a-a	46, 74, 109, 217, 254, 265, 290, 291, 292, 294, 308, 312, 313, 317, 324, 334, 335, 346, 351, 360	ng-g	285, 306, 346	
a-e	284, 328	k-g	46, 149	
e-e	122, 187, 190, 276, 290	k—	249, 306	
e-a	47, 249	n-n	46, 74, 187, 290, 292, 317, 321, 328, 330, 334, 351	
i-i	46, 74, 149, 206, 249, 254, 285, 290, 291	n-g	109, 254	
o-o	187, 206, 247, 285	h-r	47, 206	
u-u	74, 109, 247, 265, 284, 292, 294, 298, 306, 317, 321, 330, 334, 335, 360	s-r	298	
u-i	351	t-l	247	
u-o	328	t—	47, 74, 217, 249, 276, 294, 306, 346	
l-l	308, 334, 335	m-m	217, 254, 265, 312, 313, 317, 324, 328	
l-r	149	v-b	109	
l-g	308	v-w	291	
l-n	265	f-b	122, 206, 290, 292, 294, 360,	
l—	284, 312, 313	f-p	254	
		p-p	190, 285	
		p-b	247, 284, 285	

Identical 187, 190, 317, 321, 330, 334

Vowel identity 217, 265, 334

Consonant mutation:

Vowel identity 46, 74, 109, 122, 206, 254, 285, 290, 292, 308, 346, 360

Terminal abrasion 324

Frontal abrasion 47, 249, 306

Frontal accretion 276

Terminal accretion 321

Metathesis 149, 334

HULA.

			a <i>a, e</i>	
		e <i>e, a</i>	o <i>o</i>	
	i <i>i, e</i>		u <i>u, i, o</i>	
ng <i>g</i>		l <i>l, r, g, n, —</i>		
		n <i>n, k, —</i>	m <i>m</i>	
		h <i>r</i>		
		s <i>r</i>		
			v <i>b, w</i>	
			f <i>b, v</i>	
k <i>k, g, —</i>		t <i>h, i, k, r, —</i>	p <i>p, b</i>	
a-a	46, 74, 109, 214, 217, 265, 276, 290, 291, 292, 294, 308, 312, 313, 317, 324, 334, 335, 346, 349, 351, 360	k-k	149, 351	
a-e	328	k-g	249, 306	
e-e	122, 187, 190, 276, 290, 349	k—	46	
e-a	47, 249	n-n	46, 74, 187, 290, 292, 317, 321, 328, 330, 334, 351	
i-i	46, 47, 149, 249, 290, 291, 298, 308, 312, 313, 321, 330, 346	n-k	254	
i-e	254	n—	109	
o-o	187, 247	h-r	47	
u-u	74, 109, 247, 265, 292, 294, 298, 306, 317, 321, 330, 334, 335, 360	s-r	298	
u-i	351	t-h	74	
u-o	328	t-i	276	
l-l	335, 349	t-k	349	
l-r	149	t-r	347	
l-g	313	t—	47, 217, 249, 294, 346	
l-n	265, 334	m-m	217, 265, 312, 313, 317, 324, 328	
l—	308, 312	v-b	109	
ng-g	308, 346	v-w	291	
		f-b	360	
		f-v	122, 214, 254, 290, 292, 294	
		p-p	190	
		p-b	247	

Identical. 190, 330, 335

Consonant identity. . . . 328

Vowel identity. 46, 109, 187, 217, 265

Consonant mutation:

Vowel identity. 74, 122, 214, 290, 291, 308, 313, 334, 346

Terminal abrasion. 306, 324

Frontal abrasion. 46, 47, 109, 308

Frontal accretion. 187

Metathesis. 149, 321

KABADI.

				a	^{-a, e}				
				e	^{e, a}	o	^{o, e}		
		i	^{i, e}				u	^{u, o}	
				l	^{r, —}				
ng	^{n, —}			n	ⁿ			m	^m
				h	^d				
				s	^t				
								v	^v
								f	^{v, s, —}
k—				t	^{k, s}			p	^p
a-a	46, 74, 214, 258, 265, 290, 292, 294, 300, 308, 309, 312, 313, 317, 324, 335, 350, 351, 360			l—	309, 312, 313, 336, 350				
a-e	258, 291			ng-n	308, 336, 350				
e-e	122, 290, 363			ng—	309				
e-a	47, 122, 249, 272			k—	46, 249, 258				
i-i	46, 47, 122, 259, 290, 291, 298, 308, 312, 313, 321, 330, 350			n-n	46, 74, 259, 290, 292, 317, 321, 330, 351				
i-e	300			h-d	47, 363				
o-o	247, 309, 336, 363			s-t	298				
o-e	259			t-k	47, 74, 247, 258, 294, 324, 350				
u-u	74, 247, 258, 265, 272, 292, 294, 298, 317, 321, 330, 335, 351			t-s	249				
u-o	360			m-m	258, 265, 312, 313, 317, 324				
l-r	265, 272, 308, 335			v-v	122, 291				
				f-v	122, 214, 290, 292, 294, 360				
				f-s	259				
				f—	272, 363				
				p-p	247				

Identical 265, 317, 321, 330, 335

Consonant identity . . . 122

Vowel identity 46

Consonant mutation:

Vowel identity 74, 122, 214, 290, 292, 298, 308, 324

Frontal abrasion 46, 249, 336

Frontal accretion 300

Terminal accretion 249, 272, 294, 300, 321, 335, 336

Metathesis 360

KEAKALO.

a-a	312, 338	l—	312
e-i	338	k-g	338
i-i	312	m-m	312

KEAPARA.

			a <i>a, e</i>		
		e <i>e, a</i>	o <i>o</i>		
	i <i>i</i>			u <i>u, i, o</i>	
		l <i>l, r, g, n, —</i>			
ng <i>g</i>		n <i>n, g</i>		m <i>m</i>	
		h <i>r</i>			
		s <i>l</i>			
				v <i>w</i>	
				f <i>v, b, g</i>	
	k <i>k, g, h</i>	t <i>l, —</i>		p <i>p, b</i>	
a-a	46, 74, 214, 217, 254, 265, 290, 291, 292, 294, 308, 312, 313, 317, 324, 334, 335, 346, 349, 351, 360	ng-g	285, 308, 346		
a-e	284, 328	k-k	149		
e-e	122, 187, 190, 290, 349	k-g	249, 297, 306		
e-a	47, 249, 272	k-h	46, 214		
i-i	46, 47, 149, 206, 249, 254, 285, 290, 291, 298, 308, 312, 313, 321, 330, 346	n-n	46, 74, 187, 290, 292, 317, 321, 328, 330, 334		
o-o	187, 206, 247, 285	n-g	254		
u-u	74, 247, 265, 272, 284, 292, 294, 298, 306, 317, 321, 330, 334, 335, 360	h-r	47, 206		
u-i	351	s-l	298		
u-o	328	t-l	247		
l-l	335, 349	t—	47, 74, 217, 249, 294, 346, 349		
l-r	149	m-m	217, 254, 265, 312, 313, 317, 324, 328		
l-g	313	v-w	291		
l-n	265, 334	f-v	122, 214, 254, 290, 292, 294		
l—	284, 297, 308, 312	f-b	272, 360		
		f-g	206		
		p-p	190, 285		
		p-b	247, 284		

Identical 187, 190, 317, 321, 330, 335

Consonant identity 328

Vowel identity 217, 265

Consonant mutation:

Vowel identity 46, 74, 122, 214, 254, 290, 291, 298, 308, 313,
334, 346, 360

Terminal abrasion 306, 324

Frontal abrasion 47, 308

Terminal accretion 321

Metathesis 149

KIRIWINA.

					a <i>a, e, i</i>				
				e <i>e, a, i</i>	o <i>o, a, u</i>				
	i <i>i</i>					u <i>u</i>			
				l <i>l, r, n, —</i>					
ng <i>g</i>				n <i>n, l</i>			m <i>m</i>		
				h <i>s</i>					
				s <i>s, n</i>					
							v <i>w</i>		
							f <i>v, k, g, d, —</i>		
							p <i>b</i>		
	k <i>k, kw, g</i>			t <i>t, d, s, k</i>					
a-a	74, 214, 217, 276, 291, 294, 302, 308, 309, 312, 313, 317, 318, 324			k-k	149, 214, 225, 297, 306				
a-e	300			k-kw	225				
a-i	290, 309, 324, 328, 350			k-g	302				
e-e	190, 297			n-n	187, 317, 328, 330				
e-a	47, 187, 190, 276, 290, 318			n-l	74				
e-i	318			h-s	47				
i-i	47, 149, 273, 285, 290, 291, 297, 300, 302, 308, 312, 313, 329, 330, 350			s-s	239				
o-o	285, 309			s-n	344				
o-a	187			t-t	47, 74, 217, 276, 306, 318, 324, 350				
o-u	309			t-d	302				
u-u	47, 149, 273, 285, 290, 291, 297, 300, 302, 308, 312, 313, 329, 330, 350			t-s	318, 329				
l-l	212, 290, 308, 312, 313, 350			t-k	294				
l-r	225, 297			m-m	217, 312, 313, 317, 318, 321, 324, 328				
l-n	309			v-w	291				
l—	291			f-v	214, 273, 290				
ng-g	285, 308, 309, 350			f-g	294				
				f-k	212				
				f-d	294				
				f—	329				
				p-b	190, 285				

Identical. 149, 217, 297, 306, 312, 317, 324

Consonant identity. . . . 318, 328

Vowel identity. 273, 329, 344

Consonant mutation:

Vowel identity. 74, 212, 214, 285, 291, 302

Terminal abrasion. 328

Frontal accretion. 187, 273, 276

Terminal accretion. 149, 300, 309, 317, 330

Metathesis. 308, 313, 350

KIVIRI.

			a	<i>a, e, o, u</i>	
		e	<i>e, a, i</i>	o	<i>o</i>
	i	<i>i</i>			u <i>u, a</i>
			l	<i>r, n, —</i>	
ng	<i>n, m</i>		n	<i>n</i>	m <i>m</i>
			h	<i>s, r</i>	
			s	<i>s</i>	
					v
					f <i>b</i>
					p <i>p, f</i>
	k	<i>k, g, s, —</i>	t	<i>t</i>	
a-a	74, 199, 217, 278, 313, 324, 328, 340, 350		ng-m	199, 285	
a-e	350		k-k	350	
a-o	199		k-g	225, 306	
a-u	300		k-s	297	
e-e	190		k—	249	
e-a	249		n-n	74, 328, 350	
e-i	363		h-s	278	
i-i	249, 300, 312, 313, 350		h-r	340	
o-o	285, 363		s-s	344	
u-u	74, 278, 306, 344		t-t	74, 199, 217, 249, 306, 324, 350	
u-a	306		m-m	217, 312, 313, 324, 328, 340	
l-r	225, 297		f-b	282, 363	
l-n	312, 313		p-p	285	
l—	350		p-f	190	
ng-n	350				

Identical 74, 217, 324, 344

Terminal abrasion 350

Vowel identity 350

Consonant mutation:

Vowel identity 190, 278, 313, 340, 363

Terminal abrasion 285, 312, 328

Terminal abrasion 285, 312, 328, 350

Terminal accretion 190, 278

KOITA.

a-a	217	m-m	217	t-m	217
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KUBIRI.

				a	<i>a, e</i>				
			e	<i>e, a</i>	o	<i>o, a</i>			
		i	<i>i</i>			u	<i>u, o</i>		
				l	<i>r, n</i>				
	ng			n	<i>n, m</i>			m	<i>m</i>
				h	<i>s, r</i>				
				s	<i>s</i>				
								v	
								f	<i>b, —</i>
								p	
		k	<i>k, g, —</i>		t	<i>t</i>			
a-a	74, 217, 278, 300, 302, 312, 313, 317, 324, 328, 340, 351, 360			k-k	351				
				k-g	225, 302				
a-e	316			k—	249, 306				
e-e	363			n-n	74, 328, 351				
e-a	249			n-m	317				
i-i	249, 300, 302, 312, 313			h-s	278				
o-o	363			h-r	340				
o-a	282			s-s	344				
u-u	74, 278, 282, 306, 316, 317, 344, 351, 360			t-t	74, 217, 249, 302, 306, 324				
				m-m	217, 312, 313, 316, 317, 324, 328, 340				
u-o	328			f-b	282, 363				
l-r	225, 316			f—	360				
l-n	312, 313								

Identical 74, 217, 324, 344, 351 Frontal abrasion 249, 306
 Consonant identity 316, 328 Terminal accretion . 249, 278, 300,
 Consonant mutation: 302, 340
 Vowel identity..278, 306, 312, 313, 363 Metathesis..... 302

KWAGILA.

				a	<i>a, o</i>				
			e	<i>i</i>	o				
		i	<i>i</i>			u	<i>u</i>		
				l	<i>r, —</i>				
	ng	<i>n</i>		n	<i>d</i>			m	<i>m</i>
				h					
				s					
								v	<i>g</i>
								f	
								p	<i>b</i>
		k	<i>k</i>		t	<i>t</i>			
a-a	313, 324, 350			ng-n	350				
a-o	291			k-k	297				
e-i	190			n-d	330				
i-i	291, 313, 330, 350			t-t	324, 350				
u-u	330			m-m	313, 324				
l-r	297			v-g	291				
l—	313, 350			p-b	190				
Identical	324			Frontal accretion	190				
Vowel identity	350			Terminal accretion	190, 330				

MAILU.

a-a	312	l—	312
i-i	312	m-m	312

MASSIM.

a-a	268, 291, 318	m-m	318
e-i	318	t-t	268, 318
i-i	291	v-w	291
l-r	268		

MEKEO.

		a	<i>a</i>				
		e	<i>e, a</i>	o	<i>o, e, u</i>		
	i	<i>i</i>			u	<i>u</i>	
			l	<i>l, —</i>			
ng	<i>ng, n</i>		n	<i>n, ng, —</i>		m	<i>m</i>
			h	<i>k</i>			
			s	<i>k</i>			
						v	<i>p</i>
						f	<i>f, p, —</i>
k—			t	<i>k, —</i>		p	<i>f</i>
a-a	46, 74, 109, 207, 214, 217, 254, 276, 290, 292, 294, 309, 312, 313, 318, 342, 350, 360		k—	46			
e-e	190, 276, 290, 318, 363		n-n	259, 321, 342			
e-a	272		n-ng	46, 74, 254, 292			
i-i	46, 206, 254, 259, 290, 312, 313, 321, 342, 350		n—	109, 290			
o-o	246, 247, 336, 363		h-k	206, 363			
o-e	259		s-k	342			
o-u	309		t-k	247			
u-u	74, 109, 207, 247, 272, 292, 294, 321, 360		t—	74, 207, 217, 276, 294, 318, 350			
l-l	336		m-m	217, 254, 312, 313, 318			
l—	309, 312, 313, 350		v-p	109			
ng-ng	309, 336		f-f	294			
ng-n	350		f-p	206, 214, 254, 272, 290, 292, 360, 363			
			f—	259			
			p-f	190, 207, 247			

Identical. 321, 336

Vowel identity. 46, 109, 217, 276, 318

Consonant mutation:

Vowel identity. 190, 206, 207, 214, 254, 290, 342, 360

Frontal abrasion. 46, 109

Frontal accretion. 272

Terminal accretion. 74, 254

MISIMA.

			a <i>a, e, i, u</i>	
		e <i>e, a, i</i>	o <i>o</i>	
	i <i>i</i>			u <i>u</i>
		l <i>l, n, —</i>		
ng <i>n, m</i>		n <i>n, l, k, —</i>	m <i>m</i>	
		h <i>r</i>		
		s <i>s, h</i>		
			v <i>w, r</i>	
			f	
	k <i>k, g</i>	t <i>t, n</i>	p <i>p, b</i>	
a-a	109, 199, 217, 308, 312, 324, 342, 350	k-k	351	
a-e	291	k-g	297	
a-i	328	n-n	259, 330, 342, 351	
a-u	351	n-l	342	
e-e	190	n-k	328	
e-a	47	n—	109	
e-i	190	h-r	47	
i-i	47, 259, 291, 312, 330, 342	s-s	342	
o-o	247	s-h	342	
u-u	109, 247, 328, 330	t-t	47, 199, 217, 324, 350	
l-l	308	t-n	217	
l-n	312	m-m	217, 312, 324, 328	
l—	297, 350	v-w	291	
ng-n	308, 350	v-r	109	
ng-m	199	p-p	247	
		p-b	190	

Identical 217, 324, 342

Vowel identity 109, 330

Consonant mutation:

Vowel identity 190, 199, 308, 312

Terminal abrasion 259, 308

Frontal abrasion 109

Metathesis 247

MUGULA.

	a <i>a, e, o</i>	
	e <i>e, a, i</i> o <i>o, i</i>	
i <i>i</i>		u <i>u, oa</i>
	l <i>l, n, —</i>	
ng <i>n, m</i>	n <i>n</i>	m <i>m</i>
	h <i>s</i>	
	s <i>s, sh</i>	
		v <i>g</i>
		f <i>v, w, s, k</i>
k	t <i>t, k, h</i>	p <i>p, b</i>

a-a	199, 313, 324	n-n	290, 330
a-e	294, 350	h-s	363
a-o	291	s-s	344
e-e	190	s-sh	298
e-a	290	t-t	199, 324, 350
e-i	190, 363	t-k	294
i-i	290, 291, 298, 313, 330, 350	t-h	247
o-o	363	m-m	313, 324
o-i	247	v-g	291
u-u	212, 294, 298, 330, 344	f-v	294
u-oa	247	f-w	363
l-l	212	f-s	290
l-n	313	f-k	212
l—	350	p-p	247
ng-n	350	p-b	190
ng-m	199		

Identical. 324, 330, 344

Vowel identity. 350

Consonant mutation:

Vowel identity. 190, 199, 212, 298, 313

MUKAWA.

				a	<i>a, e, o</i>				
				e	<i>e, a</i>	o	<i>o, u</i>		
		i	<i>i</i>				u	<i>u, o</i>	
				l	<i>r, n, —</i>				
		ng	<i>n, m</i>	n	<i>n, k</i>		m	<i>m</i>	
				h	<i>s, g</i>				
				s	<i>s, t, —</i>				
							v		
							f	<i>p, b, w, s</i>	
							p	<i>p, b</i>	
		k	<i>k</i>	t	<i>t, s</i>				
a-a	46, 74, 199, 217, 239, 276, 290, 300, 312, 313, 317, 324, 328, 335, 340, 350, 351, 360,			k-k	46, 249, 306, 351				
a-e	316			n-n	46, 74, 259, 317, 328, 336, 351				
a-o	199			n-k	290				
e-e	190, 276, 290, 363			h-s	206				
e-a	249			h-g	340				
i-i	46, 206, 249, 259, 273, 290, 298, 300, 312, 313, 330, 350			s-s	239, 344				
o-o	259, 285, 336, 363			s-t	351				
o-u	206, 247			s—	298				
u-u	74, 239, 247, 273, 298, 302, 306, 316, 317, 330, 335, 344, 351, 360			t-t	74, 199, 217, 249, 276, 302, 306, 324, 350				
u-o	328			t-s	247				
l-r	316, 335			m-m	217, 312, 313, 316, 317, 324, 328, 340				
l-n	312, 313, 336			f-b	259, 273, 363				
l—	350			f-p	206				
ng-n	336, 350			f-w	290, 360				
ng-m	199, 285			f-s	290				
				p-p	247, 285				
				p-b	190				

Identical. 46, 74, 217, 239, 276, 306, 317, 324, 330, 335, 344, 351

Consonant identity. 249, 316, 328

Vowel identity. 273, 350

Consonant mutation:

Vowel identity. 190, 259, 312, 313

Frontal accretion. 190, 239, 273, 276, 298, 302

Terminal accretion. 190, 249, 285, 302, 330, 336, 340

Metathesis. 360

MURUA.

		a <i>a, e, i, u</i>	
	e <i>e, i, u</i>	o <i>o, au</i>	
i <i>i, u</i>		u <i>u, i, o</i>	
	l <i>n, y, —</i>		
ng <i>g, m</i>	n <i>n, s</i>	m <i>m</i>	
	h		
	s <i>s</i>		
		v <i>r</i>	
		f <i>v</i>	
k <i>k, g</i>	t <i>t, d, s</i>	p <i>p, b</i>	

a-a	199, 217, 276, 291, 308, 317, 318, 324, 350	l—	350
a-e	199, 302, 350	ng-g	285, 308, 309, 350
a-i	300, 309	ng-m	199
a-u	328	k-k	149, 306
e-e	190, 290	k-g	302
e-i	190, 318	n-n	290, 317
e-u	276	n-s	328
i-i	149, 273, 290, 291, 300, 302, 308, 312	s-s	239
i-u	285	t-t	199, 217, 276, 306, 318, 324, 350
o-o	247, 285	t-d	302
o-au	309	t-s	247
u-u	273, 306	m-m	217, 312, 317, 318, 324, 328
u-o	247, 328	v-r	291
u-i	306	f-v	273, 290
l-n	309, 312	p-p	247
l-y	308	p-b	190, 285

Identical. 217, 324

Consonant identity. . . . 306, 318

Vowel identity. 273

Consonant mutation:

Vowel identity. 190, 290, 317

Terminal abrasion. . . 312

Terminal abrasion. . . . 312, 317

Frontal accretion. . . . 273, 276

Terminal accretion. . . . 149, 199, 285, 300

Metathesis. 149

NADA.

		a <i>a, e, i, o</i>	
	e <i>e, a, i</i>	o <i>o, u</i>	
	i <i>i, a</i>	u <i>u, e, o</i>	
ng <i>g, n, m, —</i>	l <i>l, r, n, —</i>	m <i>m</i>	
	n <i>n, l, s, —</i>		
	h <i>d</i>		
	s <i>s</i>		
		v <i>p^w, r</i>	
		f <i>v, k, —</i>	
k <i>k, k^w, g</i>	t <i>t, d, s</i>	p <i>p, b</i>	
a-a 109, 217, 276, 291, 302, 308, 309, 312, 313, 317, 318, 324, 340, 342, 350	ng-m 199	ng— 308	
a-e 199	k-k 149, 306, 351	k-k^w 225	
a-i 290, 309, 328, 350, 351	k-g 302	n-n 290, 317, 330, 351	
a-o 199	n-l 342	n-s 328	
e-e 190	n— 109	h-d 340	
e-a 190, 276, 290	s-s 239, 342, 344	t-t 199, 217, 276, 306, 318, 324, 350	
e-i 318	t-d 302	t-s 247	
i-i 149, 225, 290, 291, 308, 312, 313, 330, 342	m-m 217, 312, 313, 317, 318, 324, 328, 340	v-p^w 109	
i-a 273	v-r 291	f-v 273	
o-o 247	f-k 212	f— 290	
o-u 309	p-p 247	p-b 190	
u-u 109, 212, 273, 306, 317, 328, 330, 351			
u-e 344			
u-o 247			
l-l 212, 308, 312			
l-r 225			
l-n 309, 313			
l— 350			
ng-g 309			
ng-n 350			

Identical. 149, 217, 306, 312, 317, 324, 330

Consonant identity. . . . 318, 344

Consonant mutation:

Vowel identity. 212, 225, 313, 342

Terminal abrasion. . . . 302, 340

Terminal abrasion. 302, 340

Frontal accretion. 273

Terminal accretion. 149, 199

Metathesis. 109

OIUN.

		a <i>a, e, o</i>	
	e <i>e, a, i</i>	o <i>a</i>	
	i <i>i, u</i>		u <i>u, a, i</i>
ng <i>n, m</i>		l <i>r, —</i>	
		n <i>n, m</i>	m <i>m</i>
		h <i>r</i>	
		s <i>n, —</i>	
			v
			f <i>b</i>
k <i>k, g, s, —</i>	t <i>t</i>		p <i>f</i>
a-a 74, 199, 217, 258, 290, 313, 317, 324, 340, 350	ng-m 199		
a-e 217	k-k 149, 225		
a-o 199	k-g 306		
e-e 190, 290, 363	k-s 297		
e-a 187	k— 249, 258		
e-i 249	n-n 74, 187, 290		
i-i 149, 249, 290, 298, 350	n-m 317		
i-u 313	h-r 340		
o-a 187, 336, 363	s-n 344		
u-u 74, 258, 298, 306, 317, 344	s— 298		
u-a 306	t-t 74, 199, 217, 249, 258, 306, 324, 350		
u-i 344	m-m 217, 258, 313, 317, 324, 340		
l-r 225, 297	f-b 282, 290, 363		
l— 313, 350	p-f 190		
ng-n 336, 350			

Identical 74, 149, 324

Consonant identity 217

Vowel identity 317

Consonant mutation:

Vowel identity 190, 340, 363

Terminal abrasion 290

Terminal abrasion 290, 350

Frontal abrasion 249, 336

Frontal accretion 149, 187, 225

Terminal accretion 187, 190, 249, 336

PANAIETI.

		a	<i>a, e, u</i>	
		e	<i>e, a, i</i>	o <i>o, u</i>
	i <i>i</i>			u <i>u</i>
		l	<i>r, n, —</i>	
ng <i>n, g</i>		n	<i>n, ng, g, —</i>	m <i>m</i>
		h	<i>r</i>	
		s	<i>s</i>	
				v <i>w, r</i>
				f <i>p, —</i>
				p <i>p, b</i>
	k <i>k</i>	t <i>t, h, n</i>		

a-a	74, 109, 214, 217, 239, 292, 308, 309, 312, 313, 324, 350	k-k	225, 249
a-e	291	n-n	74, 259, 330
a-u	328	n-ng	292
e-e	190, 249	n-g	328
e-a	47	n—	109
e-i	190	h-r	47
i-i	47, 249, 259, 312, 313, 330	s-s	239
o-o	247	t-t	47, 74, 217, 249, 324, 350
o-u	309	t-h	247
u-u	74, 109, 239, 247, 292, 328, 330	t-n	217
l-r	225, 308	m-m	217, 312, 313, 324, 328
l-n	309, 312, 313	v-r	109
l—	350	v-w	291
ng-n	308, 350	f-p	214, 292
ng-g	309	f—	214
		p-p	247
		p-b	190

Identical 74, 217, 239, 249, 324, 330

Consonant mutation:

Vowel identity 190, 214, 292, 308, 312, 313

Terminal abrasion 259, 308

Frontal accretion 239

Terminal accretion 324

Metathesis 247

POKAU.

			a a, e	
		e c, a, i	o o, e	
	i i, e		u u, o	
		l l, i, —		
ng	n, l, —	n n, —		m m
		h d		
		s d		
			v v	
			f v, b, k	
			p b, v	
	k k, —	t k, d		
a-a	46, 74, 109, 207, 214, 217, 258, 265, 284, 292, 308, 309, 312, 313, 317, 324, 339, 346, 350, 351, 360	ng-n	285, 308, 346	
a-e	291	ng-l	309	
e-e	190, 363	ng—	350	
e-a	249	k-k	149	
e-i	122	k—	46, 249, 258, 306	
i-i	46, 149, 206, 249, 259, 285, 291, 298, 308, 312, 313, 321, 330, 346, 350	n-n	46, 74, 259, 292, 317, 321, 330, 351	
i-e	273	n—	109	
o-o	206, 285, 309, 363	h-d	206, 339, 363	
o-e	259	s-d	351	
u-u	74, 109, 207, 258, 265, 273, 284, 292, 298, 306, 317, 321, 330, 360	t-k	74, 207, 217, 249, 258, 306, 324, 346, 350	
u-o	351	t-d	298	
l-l	265, 284, 308, 309, 339	m-m	217, 258, 265, 312, 313, 317, 324	
l-i	284	v-v	109, 291	
l—	312, 313, 350	f-v	122, 206, 273, 292, 360, 363	
		f-b	214	
		f-k	259	
		p-b	190, 207, 285	
		p-v	284	

Identical 149, 265, 317, 321, 330

Vowel identity 46, 109

Consonant mutation:

Vowel identity 74, 190, 206, 207, 214, 217, 284, 285, 292, 298,
306, 308, 309, 324, 339, 360, 363

Frontal abrasion 46, 109, 306

Frontal accretion 190

Terminal accretion 190, 249, 321

Metathesis 273

RAQA.

		a <i>a, o</i>	
	e <i>e, i</i>	o <i>o, a</i>	
i <i>i</i>		u <i>u, o</i>	
ng <i>n, m</i>	l <i>r, —</i>		
	n <i>n, m</i>	m <i>m, d</i>	
	h <i>r, l</i>		
	s <i>n, —</i>		
		v	
		f <i>b</i>	
k <i>k, ka, —</i>	t <i>t, d</i>	p <i>b</i>	
a-a 74, 199, 217, 317, 324, 328, 340, 350	k-ka 225		
a-o 199	k— 249		
e-e 190, 363	n-n 74, 328		
e-i 249	n-m 317		
i-i 225, 249, 298, 350	h-r 340		
o-o 336, 363	h-l 363		
o-a 282, 336	s-n 344		
u-u 74, 282, 298, 306, 317, 344	s— 298		
u-o 328	t-t 74, 199, 217, 249, 306, 324, 350		
l-r 225	t-d 217		
l— 336, 350	m-m 217, 317, 324, 328, 340		
ng-n 336, 350	m-d 217		
ng-m 199	f-b 282		
k-k 306	p-b 190		

Identical. 74, 217, 306, 324

Consonant identity. . . . 328

Vowel identity. 225, 317, 344, 350, 363

Consonant mutation:

Vowel identity. 190

Frontal abrasion. 249, 336

Frontal accretion. 190, 340

Terminal accretion. . . . 190, 336

RORO.

		a	<i>a, e</i>	
		e	<i>e, a</i>	o <i>o, a, e, u</i>
	i <i>i</i>			u <i>u, i, o</i>
		l	<i>l, r, —</i>	
ng	<i>n, —</i>	n	<i>n</i>	m <i>m</i>
		h	<i>t, z, —</i>	
		s	<i>h, z, t</i>	
				v <i>v, b</i>
				f <i>v, b, h, —</i>
k—		t	<i>t, h</i>	p <i>p, b</i>
a-a	46, 74, 214, 217, 276, 290, 292, 300, 308, 309, 312, 313, 324, 335, 339, 346, 350, 360	ng—	309, 346, 350	
a-e	291	k—	46, 249, 306	
e-e	190, 276, 290, 363	n-n	46, 74, 254, 259, 290, 321	
e-a	122, 249, 272	h-t	206, 363	
i-i	46, 122, 206, 249, 254, 259, 290, 291, 298, 300, 308, 312, 313, 321, 346, 350	h-z	206	
o-o	206, 247, 336, 363	h—	339	
o-a	336	s-h	239	
o-e	259	s-z	298	
o-u	309	s-t	298	
u-u	74, 292, 292, 298, 306, 321, 335, 360	t-t	247, 249	
u-i	239	t-h	74, 217, 276, 306, 324, 346, 350	
u-o	247	m-m	217, 312, 313, 324	
l-l	308	v-v	291	
l-r	272, 308, 335, 339	v-b	122, 291	
l—	309, 312, 313, 336, 350	f-v	206, 254	
ng-n	308, 336	f-b	214, 272, 290, 360, 363	
		f-h	259	
		f—	292	
		p-p	190	
		p-b	247	

Identical. 190, 321, 335, 339

Vowel identity. 46, 276

Consonant mutation:

Vowel identity. 74, 206, 214, 217, 254, 290, 298, 308, 324, 360, 363

Frontal abrasion. 46, 239, 249, 292, 306, 336

Frontal accretion. 300, 339

Terminal accretion. 190, 247, 249, 259, 335, 350, 360

RUBI.

		a <i>a, e, i, o</i>	
		e <i>e, a, i o o</i>	
	i <i>i</i>		u <i>u, o</i>
		l <i>l, n, —</i>	
ng <i>g, mo, —</i>		n <i>n, g</i>	m <i>m</i>
		h	
		s <i>r</i>	
			v <i>—</i>
			f <i>w, g, —</i>
	k <i>k, g, —</i>	t <i>t, k, r</i>	p <i>p, b, w</i>
a-a	46, 199, 217, 265, 276, 278, 292, 312, 313, 317, 321, 324, 334, 349, 351, 360	ng—	285
a-e	328	k-k	351
a-i	284, 290	k-g	46
a-o	109	k—	249, 306
e-e	187, 190, 276, 290	n-n	46, 187, 290, 317, 321, 328, 334, 351
e-a	249	n-g	109
e-i	349	s-r	298
i-i	46, 249, 285, 290, 298, 312, 313, 321	t-t	199, 217, 249, 276, 306, 324
o-o	187, 285	t-k	349
u-u	109, 265, 278, 284, 292, 298, 306, 317, 321, 334, 351, 360	t-r	278
u-o	328	m-m	217, 265, 312, 313, 317, 324, 328
l-l	349	v—	109
l-n	334	f-w	360
l—	265, 284, 312, 313	f-g	360
ng-g	285	f—	290, 292
ng-mo	199	p-p	285
		p-b	190, 285
		p-w	284

Identical 217, 276, 317, 321, 324

Consonant identity 328

Vowel identity 187, 265

Consonant mutation:

Vowel identity 46, 190, 199, 278, 285, 298, 306, 334

Terminal abrasion 292

Frontal abrasion 249, 265, 292, 306

Frontal accretion 187

Terminal accretion 46, 249, 321

Metathesis 360

SARIBA.

			a <i>a, e, i, o</i>	
		e <i>e, a, i</i>	o <i>o, i</i>	
	i <i>i, u</i>		u <i>u, a, o</i>	
ng <i>n, m</i>		l <i>r, n</i>		m <i>m</i>
		n <i>n, g</i>		
		h <i>s</i>		
		s <i>s</i>		
			v <i>w, —</i>	
			f <i>v, u, w, s, k, —</i>	
k <i>k, g, —</i>		t <i>t, d, k, s</i>	p <i>p, b</i>	
a-a 46, 74, 109, 199, 217, 239, 258, 265, 276, 291, 313, 324		k— 258		
a-e 278, 294		n-n 74, 290, 321, 328, 330		
a-i 328		n-g 109		
a-o 258		h-s 278, 363		
e-e 190, 276, 290, 297, 363		s-s 239, 298		
e-a 249, 272		t-t 74, 199, 217, 247, 249, 258, 276, 324		
e-i 363		t-d 329		
i-i 46, 149, 249, 285, 290, 291, 297, 298, 313, 330		t-k 294		
i-u 329		t-s 258		
o-o 285, 363		m-m 217, 258, 265, 313, 321, 324, 328		
o-i 247		v-w 291		
u-u 74, 109, 212, 239, 265, 278, 294, 298, 321, 329, 330		v— 109		
u-a 272, 328		f-v 272		
u-o 247		f-w 294, 363		
l-r 149, 212, 297		f-u 363		
l-n 265, 313		f-s 290		
ng-n 285		f-k 212		
ng-m 199		f— 329		
k-k 46, 249, 297		p-p 247		
k-g 149, 249, 272		p-b 190, 285		

Identical. 46, 74, 217, 239, 276, 297, 298, 324, 330

Consonant identity. . . . 249, 328

Vowel identity. 265

Consonant mutation:

Vowel identity. 190, 199, 212, 285, 291, 313, 363

Frontal abrasion. 321

Frontal accretion. 149, 239, 276, 278

Terminal accretion. 109, 149, 272, 321, 328

Metathesis. 149

SINAUGORO.

		a <i>a, e</i>	
		e <i>e, a</i>	o <i>o</i>
	i <i>i</i>		u <i>u, o</i>
		l <i>l, r, n, g, —</i>	
ng <i>g</i>		n <i>n, g</i>	m <i>m</i>
		h <i>l</i>	
		s <i>l, r</i>	
			v <i>w, —</i>
			f <i>v</i>
k <i>k, g</i>		t <i>t, k, s, l</i>	p <i>b, —</i>
a-a	46, 74, 109, 214, 217, 265, 276, 290, 291, 292, 312, 313, 317, 318, 321, 324, 334, 335, 338, 346, 349, 351	k-k	351
a-e	328	k-g	46, 214, 249, 306, 338
e-e	122, 187, 190, 276, 290, 318, 338, 349	n-n	46, 74, 187, 290, 292, 317, 321, 328
e-a	47, 249	n-g	109
i-i	46, 47, 249, 285, 290, 291, 298, 312, 313, 321, 330, 346	h-l	47
o-o	187, 247, 285	s-l	298
u-u	74, 109, 247, 265, 292, 298, 306, 317, 330, 334, 335, 351	s-r	338
u-o	328	t-t	47, 74, 217, 249, 306, 324, 346
l-l	335	t-k	349
l-r	349	t-l	247
l-n	265, 334	t-s	276, 318
l-g	313	m-m	217, 265, 312, 313, 317, 318, 324, 328
l—	312, 313	v-w	291
ng-g	285, 346	v—	109
		f-v	122, 214, 290, 292
		p-b	190, 285
		p—	247

Identical 74, 217, 317, 321, 324, 330, 335

Consonant identity . . . 325

Vowel identity 109, 187, 265, 276, 318

Consonant mutation:

Vowel identity 46, 122, 190, 214, 285, 290, 291, 298, 306, 313, 334, 336

Frontal accretion 187, 190, 276

Terminal accretion 249, 321

SUAU.

			a <i>a, e, o</i>	
		e <i>e, a</i>	o <i>o</i>	
	i <i>i</i>			u <i>u, o</i>
		l <i>r, n, —</i>		
ng <i>n, m</i>		n <i>n</i>		m <i>m</i>
		h <i>s</i>		
		s <i>s</i>		
				v <i>g</i>
				f <i>v, w, s, h, e, —</i>
				p <i>b, —</i>
	k <i>g, —</i>	t <i>t, s, —</i>		
a-a	46, 74, 199, 207, 217, 239, 258, 265, 276, 278, 290, 292, 313, 317, 318, 324, 350, 360	k—	46, 249, 258	
a-e	294	n-n	74, 290, 292, 317, 321, 330	
a-o	199, 291	h-s	278, 363	
e-e	190, 276, 290, 318, 363	s-s	239, 298, 344	
e-a	249	t-t	74, 199, 207, 217, 249, 258, 276, 318, 324	
i-i	46, 149, 249, 290, 291, 298, 313, 330, 350	t-s	247, 258	
o-o	247, 363	t—	294	
u-u	74, 207, 212, 239, 247, 258, 265, 278, 292, 294, 298, 317, 330, 344, 360	m-m	217, 258, 265, 313, 317, 318, 321, 324	
u-o	321	v-g	291	
l-r	149, 212	f-v	294, 363	
l-n	265, 313	f-w	290	
l—	350	f-h	290	
ng-n	350	f-s	290	
ng-m	199	f-e	292	
k-g	149	f—	212, 360	
		p-b	190, 207	
		p—	247	

Identical 74, 217, 239, 276, 298, 317, 318, 324, 330, 344

Vowel identity 46, 265

Consonant mutation:

Vowel identity 190, 207, 212, 278, 313, 350, 363

Terminal abrasion 290

Frontal abrasion 46, 247, 249, 321

Frontal accretion 149

Terminal accretion 207

Metathesis 149

TAGULA.

			a	<i>a, o</i>	
		e	<i>e, i</i>	o	<i>o, u, we</i>
	i	<i>i, u</i>		u	<i>u, ia</i>
			l	<i>l, n</i>	
ng	<i>ng</i>		n	<i>n, ng</i>	m <i>m</i>
			h		
			s		
					v
					f <i>w, v</i>
	k <i>g, —</i>		t <i>d, r</i>		p <i>b</i>
a-a	217, 258, 294, 302, 312, 313, 317, 324	l-n	313		
a-o	258	ng-ng	336		
e-e	190	k-g	302		
e-i	190	k—	258		
i-i	247, 259, 312, 313	n-n	259		
i-u	259, 302	n-ng	259		
o-o	247, 336	t-d	247, 258, 302		
o-u	336	t-r	217, 258, 294, 324		
o-we	336	m-m	217, 258, 312, 313, 317, 324		
u-u	212, 294	f-v	294		
u-ia	212	f-w	212		
l-l	212, 312, 336	p-b	190, 247		

Identical. 312

Vowel identity. 217

Consonant mutation:

Vowel identity. 190, 212, 247, 294, 313, 324

Terminal abrasion. 259, 317

Frontal accretion. 247, 336

TAUPOTA.

			a <i>a, i, o</i>	
		e <i>e, a</i>	o <i>o</i>	
	i <i>i, a, e</i>		u <i>u, o</i>	
		l <i>l, r, n, g</i>		
ng <i>n, g, m</i>		n <i>n, g, h, —</i>	m <i>m</i>	
		h <i>t</i>		
		s <i>h, g', —</i>		
			v <i>w</i>	
			f <i>v, w, b, —</i>	
	k <i>k, g, —</i>	t <i>t, —</i>	p <i>b</i>	
a-a	74, 199, 217, 239, 265, 290, 291, 300, 312, 313, 317, 324, 339, 350, 360	ng-m	199	
a-i	328	k-k	225	
a-o	199	k-g	297	
e-e	190, 290	k—	46, 306	
e-a	272	n-n	46, 74, 290, 317, 330	
i-i	46, 259, 290, 291, 298, 300, 312, 313, 350	n-g	254	
i-e	254, 330	n-h	328	
i-a	254	n—	259	
o-o	259, 282, 336	h-t	339	
u-u	74, 239, 265, 272, 282, 298, 302, 306, 317, 321, 330, 344, 360	s-h	239	
u-o	328	s-g'	344	
l-l	339, 350	s—	298	
l-r	225, 297	t-t	74, 199, 302, 306, 324, 350	
l-n	265, 312, 313, 336	t—	217	
l-g	272	m-m	217, 265, 312, 313, 317, 321, 324, 328	
ng-n	336	v-w	291	
ng-g	350	f-v	254, 259, 282, 290	
		f-w	290, 360	
		f-b	272	
		f—	360	
		p-b	190	

Identical..... 74, 239, 317, 324

Vowel identity..... 46, 217, 259, 265, 344

Consonant mutation:

Vowel identity..... 190, 282, 290, 291, 306, 312, 313, 350

Frontal abrasion..... 46, 259, 306, 32

Frontal accretion..... 225, 239, 298

Terminal accretion..... 190, 225, 254, 272, 300, 302, 321, 330, 336, 339

Metathesis..... 360

TAVARA.

		a	<i>a, o</i>	
		e	<i>e, a, u</i>	o <i>o, u</i>
	i	<i>i, o</i>		u <i>u, o</i>
		l	<i>l, n</i>	
ng	<i>n, g, m</i>	n	<i>n</i>	m <i>m</i>
		h	<i>h, t</i>	
		s		
				v <i>g</i>
				f <i>p, w, h</i>
				p <i>p</i>
	k	<i>g, h, —</i>	t	<i>t, —</i>
a-a	46, 74, 199, 217, 258, 265,	ng-m	199	
	290, 300, 313, 324, 339, 350	k-g	272	
a-o	199, 258, 291	k-h	297	
e-e	290	k—	46, 258	
e-a	272	n-n	46, 74, 259, 290	
e-u	190	h-h	206	
i-i	46, 259, 290, 291, 300, 312,	h-t	339	
	313, 350	t-t	74, 199, 258, 324, 350	
i-o	206	t—	217	
o-o	259, 336	m-m	217, 258, 265, 312, 313, 321,	
o-u	206		324, 328	
u-u	74, 258, 265, 272, 321	v-g	291	
u-o	328	f-p	206	
l-l	297	f-w	259, 290	
l-n	265, 312, 313, 336, 350	f-h	272	
ng-n	336	p-p	190	
ng-g	350			

Identical. 74, 324

Vowel identity. 46, 217, 265

Consonant mutation:

Vowel identity. 259, 290, 313, 350

Terminal abrasion. 312

Terminal abrasion. 312

Frontal abrasion. 46, 321

Frontal accretion. 190

Terminal accretion. 272, 300, 321, 336, 339

TUBETUBE.

		a <i>a, e, i</i>	
	e <i>e, a, i</i>	o <i>o, ua</i>	
i <i>i</i>		u <i>u, i</i>	
	l <i>l, n, y</i>		
ng <i>n</i>	n <i>n</i>	m <i>m</i>	
	h <i>s</i>		
	s <i>s</i>		
		v <i>w</i>	
		f <i>h, s, i, v, w, —</i>	
k <i>k, g, —</i>	t <i>t, s, k</i>	p <i>p, b</i>	
a-a 46, 74, 217, 258, 265, 291,	k— 258		
292, 294, 298, 321, 330, 360	n-n 46, 74, 259, 290, 292, 317,		
a-e 291, 294, 300, 360	330		
a-i 265	h-s 206, 340		
e-e 190, 290, 318	s-s 298		
e-a 249	t-t 74, 217, 249, 258, 318, 324		
e-i 190	t-s 247, 258		
i-i 46, 149, 206, 249, 259, 285,	t-k 294		
290, 291, 298, 300, 313, 330	m-m 217, 258, 265, 313, 317, 318,		
o-o 206, 285	321, 324, 340		
o-ua 247	v-w 291		
u-u 74, 212, 247, 258, 265, 292,	f-h 212		
294, 298, 321, 330, 360	f-s 290		
u-i 317	f-i 292		
l-l 212	f-v 294		
l-n 265, 313	f-w 360		
l-y 265	f— 206		
ng-n 285	p-p 247		
k-k 46, 149	p-b 190, 285		
k-g 249			

Identical..... 46, 74, 149, 217, 298, 318, 324, 330

Consonant mutation:

Vowel identity..... 190, 206, 212, 285, 291, 313, 340

Terminal abrasion..... 259, 317

Frontal abrasion..... 321

Terminal accretion..... 149, 249, 321

Metathesis..... 360

UNI.

	a <i>a, e, o</i>	
	e <i>e, a</i>	o <i>o, eo, a</i>
i <i>i</i>		u <i>u</i>
	l <i>l, r, i, —</i>	
ng <i>n, —</i>	n <i>n, —</i>	m <i>m</i>
	h <i>d</i>	
	s <i>t</i>	
		v <i>v, w</i>
		f <i>v, b, g</i>
k <i>—</i>	t <i>k, —</i>	p <i>b</i>

a-a	46, 217, 265, 284, 290, 292, 312, 313, 317, 324, 339, 342, 346, 360	l—	312, 313, 336
a-e	291	ng-n	346
a-o	284	ng—	336
e-e	290	k—	46
e-a	272	n-n	46, 290, 292, 317, 321, 342
i-i	46, 259, 290, 291, 312, 313, 321, 342, 346	n—	259, 342
o-o	336	h-d	339
o-eo	259	s-t	342
o-a	346	t-k	324, 346
u-u	265, 272, 284, 292, 317, 321, 360	t—	217
l-l	265, 272, 284, 339	m-m	217, 265, 312, 313, 317, 324
l-r	265	v-v	291
l-i	284	v-w	291
		f-v	290, 292, 360
		f-b	272, 290
		f-g	259
		p-b	284

Identical 265, 321

Vowel identity 46, 217, 339

Consonant mutation:

Vowel identity 290, 292, 324, 342, 360

Frontal abrasion 46, 259

Frontal accretion 321, 336

Terminal accretion 259, 321

WAGAWAGA.

a-a	74, 217, 290	t-t	74
e-e	290	t—	217
i-i	290	m-m	217
i-u	74	f-w	290
n-n	74, 290		

WAIMA.

		a a	
	e a	o	
	i i		u u
ng n, —		l l, r, —	
		n n	m m
		h h	
		s t	
k			v
		t t, h	f
			p
a-a	308, 312, 335, 346	ng—	346
e-a	47	n-n	321
i-i	47, 308, 312, 321, 346	h-h	47
u-u	321, 335, 344	s-t	344
l-l	308	t-t	47
l-r	335	t-h	346
l—	312	m-m	312
ng-n	308		

Identical. 47, 321, 335

Consonant mutation:

Vowel identity. 308, 344

Metathesis. 47

WEDAÜ.

		a	<i>a, i, o</i>	
		e	<i>e, a</i>	o <i>o, u</i>
	i	<i>i, a, c, o</i>		u <i>u, o</i>
		l	<i>l, r, n, g</i>	
ng	<i>n, g, m</i>	n	<i>n, g, —</i>	m <i>m</i>
		h	<i>g, —</i>	
		s	<i>g, —</i>	
				v <i>b, w</i>
				f <i>w, p, v, b</i>
				p <i>b</i>
	k	<i>k, g, —</i>	t	<i>t, —</i>
a-a	46, 74, 109, 199, 217, 239, 258, 265, 276, 290, 291, 300, 308, 313, 317, 324, 328, 340, 350, 351, 360	ng-g	308, 350	
a-i	328	ng-m	199	
a-o	199	k-k	225	
e-e	190, 276, 290, 338, 363	k-g	297, 338	
e-a	272	k—	46, 258, 306, 338	
i-i	46, 206, 259, 290, 291, 300, 308, 313, 350	n-n	46, 74, 290, 317, 351	
i-a	254	n-g	109	
i-e	308	n—	254, 259, 328	
i-o	206	h-g	340	
o-o	247, 259, 282, 336, 363	h—	206	
o-u	206	s-g	344	
u-u	74, 109, 239, 247, 258, 265, 272, 282, 302, 306, 317, 321, 344, 351, 360	s—	239	
u-o	328	t-t	74, 199, 258, 276, 302, 306, 324, 350	
l-l	272, 308	t—	217, 247	
l-r	225, 297	m-m	217, 258, 265, 313, 317, 321, 324, 328, 340	
l-n	265, 313, 336, 350	v-b	109	
l-g	272	v-w	291	
ng-n	308, 336	f-v	254, 259, 282, 290, 363	
		f-b	272	
		f-w	290, 360	
		f-p	206, 272	
		p-b	190, 247	

Identical 74, 276, 317, 324

Vowel identity 46, 217, 239, 259, 265, 344

Consonant mutation:

Vowel identity 190, 282, 290, 291, 306, 308, 313, 340, 350, 350, 363

Frontal abrasion 46, 259, 306, 321

Frontal accretion 225, 239, 254, 360

Terminal accretion 109, 190, 225, 272, 300, 302, 308, 321, 336

Metathesis 360

As was done in the preceding part of the work, we next group these mutations under their several phonetic elements. Regarded locally the following tables provide the means for an analytical study of the Polynesian content of the languages which, on the northern shore of Torres Straits, reach from the head of the Gulf of Papua to the Louisiade Archipelago. Considered more generally they fall into place as supplementary to the series of similar tables beginning on page 121.

a-e	Boniki Dobu Doura Galavi Galoma Hula	Kabadi Keapara Kiriwina Kiviri Kubiri	Misima Mugula Mukawa Murua Nada	Oiun Panaieti Pokau Roro Rubi	Sariba Sinaugoro Suau Tubetube Uni
a-i	Awalama Boniki Galavi	Kiriwina Misima Murua	Nada Rubi	Sariba Taupota	Tubetube Wedau
a-o	Awalama Boniki Dobu Galavi	Kiviri Mugula Mukawa Nada	Oiun Raga Rubi Sariba	Suau Tagula Taupota	Tavara Uni Wedau
a-u	Kiviri	Misima	Murua	Panaieti	
e-a	Boniki Dobu Doura Galavi Galoma Hula Kabadi	Keapara Kiriwina Kiviri Kubiri Mekeo Misima	Motu Mugula Mukawa Nada Oiun Panaieti	Pokau Roro Rubi Sariba Sinaugoro Suau	Taupota Tavara Tubetube Uni Waima Wedau
e-i	Keakalo Kiriwina Kiviri Kwagila	Miriam Misima Motu Mugula	Murua Nada Oiun Panaieti	Pokau Raga Rubi	Sariba Tagula Tubetube
e-o	Motu				
e-u	Boniki	Murua	Tavara		
i-a	Awalama Boniki	Galavi	Nada	Taupota	Wedau
i-e	Hula Kabadi	Motu	Pokau	Taupota	Wedau
i-o	Awalama Boniki	Galavi	Motu	Tavara	Wedau
i-u	Motu	Murua	Oiun	Sariba	Tagula
o-a	Kiriwina Kubiri	Oiun	Raga	Roro	Uni
o-e	Boniki Dobu	Doura Galavi	Kabadi Mekeo	Pokau Roro	Uni

o-i	Motu	Mugula	Sariba		
o-u	Kiriwina Mekeo	Mukawa Nada	Panaieti Roro	Tagula Tavara	Tubetube Wedau
u-a	Dobu Kiviri	Mabuiag Miriam	Motu	Oiun	Sariba
u-e	Miriam	Nada			
u-i	Galoma Hula	Keapara	Murua	Oiun	Tubetube
u-o	Awalama Boniki Galavi Galoma Hula	Kabadi Keapara Kubiri Motu Mugula	Mukawa Murua Nada Pokau	Raqa Rubi Sariba Sinaugoro	Suau Taupota Tavara Wedau
l-g	Galoma Hula	Keapara	Sinaugoro	Taupota	Wedau
l-i	Doura	Murua	Pokau	Tubetube	Uni
l-l	Awalama Boniki Dobu Doura Galavi	Hula Keapara Kiriwina Mekeo Miriam	Misima Motu Mugula Nada Pokau	Roro Rubi Sinaugoro Tagula Taupota	Tavara Tubetube Uni Waima Wedau
l-n	Awalama Boniki Dobu Galavi Galoma	Hula Keapara Kiriwina Kiviri Kubiri	Misima Mugula Mukawa Murua Nada	Panaieti Rubi Sariba Sinaugoro Suau	Tagula Taupota Tavara Tubetube Wedau
l-r	Awalama Dobu Doura Galavi Galoma Hula	Kabadi Keapara Kiriwina Kiviri Kubiri Kwagila	Massim Motu Mukawa Nada Oiun	Panaieti Raqa Roro Sariba Sinaugoro	Suau Taupota Uni Waima Wedau
l—	Boniki Dobu Domara Doura Galavi Galoma Hula	Kabadi Keakalo Keapara Kiriwina Kiviri Kwagila	Mailu Mekeo Misima Motu Mugula Mukawa	Murua Nada Oiun Panaieti Pokau Raqa	Roro Rubi Sinaugoro Suau Uni Waima
ng-g	Awalama Dobu Galoma	Hula Keapara Kiriwina	Murua Nada Panaieti	Rubi Sinaugoro Taupota	Tavara Wedau
ng-l	Pokau				

ng-m	Awalama Boniki Dobu Galavi	Kiviri Misima Mugula Mukawa	Murua Nada Oiun Raqa	Rubi Sariba Suau	Taupota Tavara Wedau
ng-n	Awalama Boniki Dobu Galavi Kabadi Kiviri	Kwagila Mekeo Misima Motu Mugula	Mukawa Nada Oiun Panaieti Pokau	Raqa Roro Sariba Suau Taupota	Tavara Tubetube Uni Waima Wedau
ng-ng	Mekeo	Tagula			
ng—	Dobu Doura	Kabadi Motu	Nada Pokau	Roro Rubi	Uni Waima
k-g	Dobu Galavi Galoma Hula Keapara	Keakalo Kiriwina Kiviri Kubiri Misima	Motu Murua Nada Oiun Rubi	Sariba Sinaugoro Suau Tagula	Taupota Tavara Tubetube Wedau
k-h	Awalama	Keapara	Tavara		
k-k	Boniki Galavi Hula Keapara Kiriwina	Kiviri Kubiri Kwagila Misima Motu	Mukawa Murua Nada Oiun Panaieti	Pokau Raqa Rubi Sariba	Sinaugoro Taupota Tubetube Wedau
k-m	Motu				
k-s	Dobu	Kiviri	Oiun		
k—	Awalama Dobu Doura Galoma Hula	Kabadi Kiviri Kubiri Mabuiag Mekeo	Motu Oiun Pokau Raqa Roro	Rubi Sariba Suau Tagula Taupota	Tavara Tubetube Uni Wedau
n-d	Kwagila				
n-g	Awalama Galoma	Keapara Panaieti	Rubi Sariba	Sinaugoro Taupota	Wedau
n-h	Awalama	Taupota			
n-k	Boniki	Galavi	Hula	Misima	Mukawa
n-l	Kiriwina	Misima	Nada		
n-m	Kubiri	Oiun	Raqa		
n-n	Awalama Boniki Dobu Doura Galavi Galoma Hula Kabadi	Keapara Kiriwina Kiviri Kubiri Mekeo Misima Motu	Mugula Mukawa Murua Nada Oiun Panaieti Pokau	Raqa Roro Rubi Sariba Sinaugoro Suau Tagula	Taupota Tavara Tubetube Uni Wagawaga Waima Wedau
n-ng	Mekeo	Panaieti	Tagula		

n-s	Murua	Nada			
n—	Boniki Doura Galavi	Hula Mekeo Misima	Nada Panaieti	Pokau Taupota	Uni Wedau
h-d	Kabadi	Motu	Nada	Pokau	Uni
h-g	Galavi	Mukawa	Wedau		
h-h	Tavara	Waima			
h-k	Mekeo				
h-l	Raqa	Sinaugoro			
h-r	Galoma Hula	Keapara Kiviri	Kubiri Misima	Oiun Panaieti	Raqa
h-s	Dobu Kiriwina	Kiviri Kubiri	Mugula Mukawa	Sariba Suau	Tubetube
h-t	Awalama	Roro	Taupota	Tavara	
h-z	Roro				
h—	Awalama	Roro	Wedau		
s-d	Doura	Motu	Pokau		
s-g	Taupota	Wedau			
s-h	Awalama	Misima	Motu	Roro	Taupota
s-k	Mekeo				
s-l	Keapara	Sinaugoro			
s-n	Kiriwina	Oiun	Raqa		
s-r	Galoma	Hula	Rubi	Sinaugoro	
s-s	Boniki Dobu Galavi Kiriwina	Kiviri Kubiri Mabuiag	Misima Mugula Mukawa	Murua Nada Panaieti	Sariba Suau Tubetube
s-sh	Mugula				
s-t	Kabadi	Mukawa	Roro	Uni	Waima
s-z	Roro				
s—	Awalama Boniki	Mukawa Oiun	Raqa	Taupota	Wedau
t-d	Awalama Dobu	Kiriwina Murua	Nada Pokau	Raqa Sariba	Tagula
t-h	Awalama Hula	Mugula	Panaieti	Roro	Waima

<i>t-i</i>	Hula				
<i>t-k</i>	Doura Hula Kabadi	Kiriwina Mekeo Mugula	Pokau Rubi	Sariba Sinaugoro	Tubetube Uni
<i>t-l</i>	Galoma	Keapara	Sinaugoro		
<i>t-m</i>	Boniki	Galavi	Koita		
<i>t-n</i>	Misima	Panaieti			
<i>t-r</i>	Hula	Rubi	Tagula		
<i>t-s</i>	Dobu Kabadi	Kiriwina Mukawa	Murua Nada	Sariba Sinaugoro	Suau Tubetube
<i>t-t</i>	Awalama Boniki Dobu Duba Galavi Kiriwina	Kiviri Kubiri Kwagila Massim Misima Motu	Mugula Mukawa Murua Nada Oiun Panaieti	Raqa Roro Rubi Sariba Sinaugoro Suau	Taupota Tavara Tubetube Wagawaga Waima Wedau
<i>t—</i>	Awalama Dobu Galoma	Hula Keapara Mekeo	Suau Taupota	Tavara Uni	Wagawaga Wedau
<i>m-d</i>	Raqa				
<i>m-m</i>	Awalama Boniki Dobu Domara Doura Duba Galavi Galoma Hula	Kabadi Keakalo Keapara Kiriwina Kiviri Koita Kubiri Kwagila Mabuiag	Mailu Massim Mekeo Miriam Misima Motu Mugula Mukawa Murua	Nada Oiun Panaieti Pokau Raqa Roro Rubi Sariba Sinaugoro	Suau Tagula Taupota Tavara Tubetube Uni Wagawaga Waima Wedau
<i>v-b</i>	Galoma	Hula	Roro	Wedau	
<i>v-g</i>	Awalama	Kwagila	Mugula	Suau	Tavara
<i>v-p</i>	Mekeo	Nada			
<i>v-r</i>	Misima	Murua	Nada	Panaieti	
<i>v-v</i>	Doura Kabadi	Motu	Pokau	Roro	Uni
<i>v-w</i>	Galoma Hula Keapara	Kiriwina Misima Panaieti	Sariba Sinaugoro	Taupota Tubetube	Uni Wedau
<i>v—</i>	Rubi	Sariba	Sinaugoro		
<i>f-b</i>	Galoma Hula Keapara	Kiviri Kubiri Mukawa	Oiun Pokau Raqa	Roro Taupota	Uni Wedau
<i>f-d</i>	Kiriwina				

f-e	Suau				
f-f	Mekeo				
f-g	Keapara	Kiriwina	Rubi	Uni	
f-h	Doura Motu	Roro	Suau	Tavara	Tubetube
f-i	Tubetube				
f-k	Boniki Doura	Galavi Kiriwina	Mugula Nada	Pokau	Sariba
f-p	Boniki Galavi	Galoma Mekeo	Mukawa Panaieti	Tavara	Wedau
f-s	Dobu Kabadi	Mugula Mukawa	Sariba	Suau	Tubetube
f-u	Sariba				
f-v	Awalama Boniki Galavi Hula Kabadi	Keapara Kiriwina Motu Mugula	Murua Nada Pokau Roro	Sariba Sinaugoro Suau Tagula	Taupota Tubetube Uni Wedau
f-w	Awalama Boniki Dobu	Galavi Mugula Mukawa	Rubi Sariba Suau	Tagula Taupota Tavara	Tubetube Wagawaga Wedau
f—	Dobu Galavi Kabadi	Kiriwina Kubiri Nada	Panaieti Roro Rubi	Sariba Suau	Taupota Tubetube
p-b	Awalama Boniki Dobu Galoma Hula Keapara	Kiriwina Kwagila Miriam Misima Motu Mugula	Mukawa Murua Nada Panaieti Pokau Raqa	Roro Rubi Sariba Sinaugoro Suau	Tagula Taupota Tubetube Uni Wedau
p-f	Kiviri	Mekeo	Oiun		
p-h	Doura				
p-p	Awalama Dobu Galoma Hula	Kabadi Keapara Kiviri Mabuiag	Misima Motu Mugula Mukawa	Murua Nada Panaieti Roro	Rubi Sariba Tavara Tubetube
p-v	Pokau				
p-w	Rubi				
p—	Sinaugoro	Suau			

The elaboration of this New Guinea material, the more particularly in consideration of its important bearing upon the Viti Stream in the southern gateway out of Indonesia, has made it advisable to extend and, when there is reason therefor, to amend the notes in several cases which have found their place in Appendix I.

46.

Until this Torres Straits material became available the line of partition between *kai* and *kani* was quite distinctly the division between Polynesia and Melanesia, for *kani* found its utmost eastern extension in Viti. Lacking support from areas of pure Polynesian, the Viti *kani* could be regarded only in the light of a Melanesian component of that mixed speech. But on the New Guinea coast, at the very portal of exit from the Malay Archipelago, we find the two stems in use side by side. Sariba exhibits the Polynesian *kai* unaltered; Suau, Mabuiag, and Dobu show the loss of the initial *k*, that loss being normal in those languages. The supposition that a medial *n* has been lost, which would be necessary to the argument of the devolution of *kai* from *kani*, has been opposed by the fact that in the four languages not only is *n* never lost, but it retains its proper value far more consistently than in most of the neighbor tongues. We may, then, safely regard *kani* as an ancient Polynesian stem which maintained its existence to a point just within Nuclear Polynesia and then was dropped from the synonymy.

47.

With this considerable record of two forms appearing side by side in each of the Pacific areas, we need have no hesitation in assuming **tahi** to be an ancient variant of the **tehi** radical. This slight phonetic change is satisfactorily explained on the theory of the neutral vowel. The series which we find in New Guinea should offer a satisfactory identification of the Indonesian material, which in the earlier note I denied. Waima *hati* is the **tahi** radical under 3214 metathesis. For the mutation of the aspirate to the sibilant in Dobu and Kiriwina *tasi* there is abundant confirmation. The mutation **h-d** in Motu and Kabadi is normal to those languages, and the kappation in the latter has become very familiar in these studies.

We now pass to a group of forms susceptible of less simple explanation, that of which Misima *tari* is the type. Nowhere have we found evidence in support of a mutation **h-r**, except in Sinaugoro with its similar **s-l** mutation. But we have some evidence in support of a **t-r** mutation, on the nature of which refer to note 258. If, then, we are precluded from the direct passage from **tahi** to *tari* we have no difficulty in finding a Motu bridge which shall give us the series **tahi-tadi-tari**, each span of which may be safely traversed. Thus we are carried over to the identification of the *tari* of Misima and Panaieti, and to Sinaugoro *tali*. Thence to *ari* is a safe step, for *t* is normally dropped in Galoma, Hula, and Keapara. This shows that the languages which use the forms *tari-ari* did not acquire the word from the Polynesian wanderers through direct contact, but as a secondary loan from the Motu-Kabadi folk. Thus having found the *r* in the **h** place and the loss of stem *t*, and both within regions of Proto-Samoan influence, we may safely accept the Indonesian identifications.

74.

It is now quite clear that our record shows the existence of a *natu* series parallel with *ati*. Therefore the forms which exhibit an initial nasal with the final *i* are to be regarded as *natu* attracted by *ati*. In this examination of the New Guinea material it is safe to assume *natu* as a Polynesian stem. Mekeo *ngau-nga* is readily establishable upon Galoma *nau* with a nasal termination, and the latter may perhaps be seen in Malekula *netin*.

76.

Particular interest attaches to the discovery of the *amu* type in Mabuiag and Miriam, western and eastern islands of the straits and remote from the New Guinea coast, for we shall make opportunity to discuss the paucity of Polynesian material in these islands. The existence of *amu* in Fotuna affords us reason to regard the type as ancient Proto-Samoan, and that Mabuiag and Miriam received it directly and not on secondary loan from Motu.

109.

We note here two series, yet reference to the several phonetic tables will show that the essential mutations, while in general feasible, are in particular not well supported.

A. Retentive of the initial consonant: Galoma, Wedau; and with obliteration of the inner labial, Sinaugoro, Sariba, Rubi.

B. Abrading the initial, but retentive of some representative of the inner labial: Pokau, Mekeo, Hula, Motu, Panaieti, Misima.

Nada *pwau* may be regarded as *apu* under 213 metathesis, and the then initial labial under such maltreatment as marks the Melanesian *q*, cf. 285. But from *pwau* Kiriwina *pwak* conforms to no phonetic law as yet found in this region.

122.

Kabadi *vai* and Roro *bai* may be taken as simple variants upon the *vei* type which has effected a lodgment in Nuclear Polynesia in Viti and Rotumā. Kabakada *wara* has already been under comment in the principal note on this item. The other forms are clear variants upon the Proto-Samoan *fe*.

149.

The Motu and Kabadi forms, referred to the simpler stem in Nifilole *laki*, may be adjudged composites of a *liki* variant. The *liki* type is found in New Guinea only in a metathetic variant: Keapara, Hula, Galoma, Suau, and Sariba in series. The other forms are of the *kiki* type with various foreign elements in composition.

190.

In the principal note on this item we have established an elemental *pe*; in this district it is recoverable from composites in Awalama and Tavara, in which the *u* suggests the intimately associable *ula* component elsewhere widely extended. The duplicated stem *pepe* is found in Hula, Keapara, Galoma, and in composition in Dobu. The ready mutant *bebe* is found simply in Rubi, Suau, Sariba; Taupota and Wedau are consimilars of *u*-

composites in Awalama and Tavara; Motu and Sinaugoro of this stem are initial composites in a class by themselves; Mukawa and Raqa are composite initial and final, the latter not identifiable but probably not *mata*, the former showing the *ula* component; the doubly composite Pokau involves the same liquid component, which has elsewhere been identified in each position; and from this we pass easily to Roro. The slightly variant *bebi* stem appears simply in Mugula, Tubetube, Tagula, Murua; the Panaieti and Misima form is most readily explicable as preduplicated. The next stem variant is *beba*, simply in Nada and Kiriwina, conduplicated in Boniki. In Kwagila we release stem *bibi* with an initial *kara* suggestive of the common liquid component. The stem *jeje* appears simply in Mekeo, and with a termination of unascertained value in Kiviri and Oiun. Thus is established a very satisfactory series of evolution forms.

206.

The few New Guinea forms exhibit harsh but not wholly improbable mutations of the consonants and, to a less degree, of the vowels of Proto-Samoan *hifo*, the *i* being the most consistent element. The aspirate is found only in Tavara; it passes to the sibilant in Tubetube, Mukawa, and Roro (*zi*); the mutation to *d* is abundantly established in Motu and Pokau, passes easily to *t* in Roro, and thence is caught in the general kappation movement to Mekeo *kipo*; these have all been downward mutations, the change to *r* in Keapara and Galoma, upward in the lingual column, has been discussed in the supplementary note 47 as diagnostic of secondary borrowing; in Wedau the aspirate is extinct. The *f*-mutations to *v*, *p*, *h*, *b*, are abundantly familiar; the *g*-mutant in Keapara looks like a secondary borrowing from Galoma neighbors; in other items it appears in Kiriwina, Rubi, and Uni; the peculiar *siio* of Tubetube is no doubt due to the fact that this language has acquired neither *v* nor *f*. The vowel changes call for no note except the occurrence of *i-o* in Tavara and Wedau; elsewhere in these data this mutation is identified in Awalama, Boniki, Galavi, and Motu.

207.

These forms entail no difficulty until we reach *ahu*, which Motu uses along with *tapu*. Inasmuch as the *t* is abundantly determined in this language, *ahu* looks like a secondary borrowing from Mekeo, where *t* is commonly elided.

212.

The New Guinea forms are all *fulu* derivatives, except possibly Suau *uru*. As that language has no *f*, this may derive from *fulu*; equally it may derive from the *ulu* which we have well established as in Proto-Samoan possession during the Melanesian transit.

214.

As in the principal note on this item, so in the Torres Straits littoral we have no difficulty in recognizing the two stems **faka** and **fa**.

217.

The presence of the form *ama* in Awalama, Taupota, Tavara and Wedau, languages which possess the *t*, forms a connecting link for this state of the stem between its occurrences in Melanesia and those in Indonesia.

225.

In the Pacific we find as stems *kili*, *kali*, *kalo*, and *kalu*. These are found in New Guinea as follows, but because of this consonantal fixity we shall not list mutant vowels.

kili: Galavi, Nada, and perhaps Raqa.

kalo: Kubiri, Kiviri, Oiun, Motu, Taupota, Wedau and Boniki.

kali: Kiriwina.

To the above New Guinea contributes:

kuli: Kiriwina and Panaieti.

Wedau and Mukawa *giai* scarcely seems associable, the resemblance to *kili* being only in the first syllable.

239.

Interesting results appear in the comparison of these New Guinea forms with the variants already noted from the Proto-Samoan *asu*. Take first the initial elements. The palatal is found in Moánu, the first landmark of the Samoa Stream; in Torres Straits, at the first landmark of the Viti Stream, in Sariba, Panaieti, Mukawa and Awalama; the whole island bars these two streams. The labial preface of Malekula Aulua is found in Galavi, Taupota, Wedau, and Boniki. Ambrym *walehi* seems paralleled with Motu *kwalahu*. The *asu* stem is identified in Suau and Dobu without alteration. Roro *hiavu* is strikingly like Lo *hiev*, in which we distinguish *hi* as the *asu* derivative and *ev-av-avu* as the *afi*-fire derivative. Nada and Murua *museu* (and the invert *umseu* in Kiriwina) seem like *asu* with the *m*-preface not elsewhere seen. In the phonetic tables regard has been had only of the recoverable *asu* and its mutants.

247.

Tagula *bibido* is our sole New Guinea occurrence of the *pito* stem, all the other examples in this area deriving from *puto*. These have been freely dealt with by the New Guinea tribesmen, but close analysis will show several series of variants, each consonant being strongly affected in the mutation. For *p* we have *p*, *b*, *f*, *m*, and extinction; for *t* we have *t*, *d*, *k*, *s*, *h*, *r*, and extinction. The *s*-forms find distant support in Buka. The mutation to *l* has a satisfactory extension in this area and affords valuable support to the note on the subject under item 258.

249.

In the absence of *t* in the languages, Hula and Keapara *gia* and Galoma *ia* derive from Sariba *gita*. As to Kabadi *is'ana*, Dr. Ray states distinctly that *s'* is found only once in New Guinea and that once is not Kabadi; however, it hangs quite properly upon *ihana* which he presents as a variant of *itana* in Roro, and the latter connects through *ita* and *gita* with *kita* and *kite*.

254.

For the most part these New Guinea identifications exhibit the *nifi*-stem before the acquisition of the conditional *ma*, which, however, appears in Mekeo, Galoma, and Keapara. In Taupota and Awalama we have an initial element which is probably formative, but we are without evidence

of transition phases which may establish *wo* as a mutant of *ma*. In the former consonant of the stem the mutation *n-ng-g-k* to extinction is steady and well established; so, too, the series of the latter consonant *f-v-p-w*.

258.

In the Proto-Samoan stem **matakut** we find four consonants to engage our attention. The *m*, in fact the whole conditional preformative *ma* with the exception of Kabadi *me*, exists unaltered through our New Guinea identifications. The *t* in second place undergoes no greater change than the kappation in Pokau and Kabadi and the change to *r* in Tagula, on which see the principal note. In Tagula *marode* we shall arrive at the most satisfactory conclusion by assuming that the stem syllable *ku* has vanished, thus leaving *d* as representative of stem *t*. The stem *k* has vanished completely in all these New Guinea identifications. The final *t* is preserved in Dobu, Oiun, Awalama; becomes *d* in Tagula, *s* in Sariba; has vanished from Pokau and Kabadi.

259.

The development of these widely diverse forms is to be studied in the mutations of the stem consonants. The former remains *n* in Mukawa, Awalama, Tavara, Roro, Kabadi, Mekeo, Pokau, Panaieti, Tubetube, Misima, Tagula; it is no more than a breathing in Motu; is lost from Taupota, Wedau, Doura, Uni, Galavi, Boniki. The *f* becomes *v* in Taupota and Wedau, *b* in Mukawa, *w* in Awalama and Tavara, *h* in Roro, and vanishes in Mekeo. From this stage we reach the extirpation of the second syllable in Panaieti, Tubetube, and Misima; and Tagula I regard as a devolution form of the latter. Returning to Roro we find the *h* passing to *s* in Motu and Kabadi. Here comes a lacuna. If we imagine a passage to *t*, practicable but nowhere recorded, the not infrequent kappation would account for Pokau, Doura, Galavi and Boniki. Thence to Uni is an easy passage.

265.

The forms in the Torres Straits area run in the series *ruma-luma-numa-numi-yuma-uma*. With the exception of *numi* we find Melanesian instances of each form.

272.

The probably more elemental stem *efu* is traceable in Keapara and Mekeo. The *lefu* stem appears in Motu, Doura, Kabadi, Roro, Uni, Wedau, Galavi, Boniki. In the principal note I pronounced, on the material then accessible, against *kabu* of the Duke of York. We now recognize a *kefu* stem, either coordinate with *lefu* and *nefu* or possibly derivative from the latter. This is found in Taupota, Wedau, Motu, Tavara, Awalama, and Sariba.

273.

The addition of this material removes the objection noted in the principal note (*b*) against the form *kuvi*. The assumption of initial *k* is of wide extent in New Guinea; in fact but two identifications lack it, Motu *uhe*, which is not the common yam name, and the variant in Pokau, which is metathetic of the 231 type.

276.

This series of identifications runs very smoothly and calls for little comment. In a group of the languages we encounter the preface *k* which has been noted in 273. So far as comparison may be made this appears in the same languages in the two items.

278.

The identifications are very simple and faithful to the *uha* stem. Sariba exhibits the preface *k* as in 276. The Rubi form with the liquid is comparable with matching forms in the other gateway.

282.

These forms are simple until we reach Kiviri-Oiun *bobu*. This seems to be a duplication of *fou* degraded either to *fo* or to *fu*, the former being intrinsically the more likely form, but we lack the data to make a determination.

284.

The course of the initial consonant in this area is to *b*, to *v*, to *h*, to *w*. The liquid passes through *i* to extinction. This passage from consonant to vowel has not been segregated in Melanesian phonology, but in New Guinea it is found in five languages and in several items.

285.

The absence of complication in these identifications in the southern gateway affords me the opportunity to note here, as satisfactorily as anywhere, my surprise that in this New Guinea material we find so marked an absence of the final consonants of the closed stems. In the hypothesis we are to regard these landings on the shore of Torres Straits as among the most ancient way-ports of the migration of the Proto-Samoan swarm, yet in this particular we find a predominance of the junior forms which in Polynesia we are to regard as developed in general since the Melanesian transit. It may well be that the New Guinea languages shared the tendency of objection to closed stems and had not yet advanced to the employment of formative suffixes, which has been the chief agent in preserving once final consonants in Nuclear Polynesian. In this case, having no means of protection for closing consonants, the process of final abrasion proceeded with scant interruption to remove them.

290.

Here, as in remoter Polynesian migration, we find the trace (Murua *vine*) of the earlier stem *fine*. Another simple stem calls for comment, *sina* in Mugula, *sine* in Suau, Sariba, Tubetube, Dobu. I incline to regard this as *fine* under a first mutation (*hine*) to the aspiration of its own series; then, by the floating of *h*, swung into secondary mutation normal to the lingual series. Thus we may establish the transition phase by which Sina has become a woman's name in Polynesia and is thus removed from possibility of association with the shining *sina* (342).

In the general *fafine* stem this material gives us reason to suspect that the former and the latter *f* are not of the same potency or quality; for that reason I note separately their mutation series for comparison. For

fa we find *fai* in Suau, confirming its occurrence at three Solomon Island stations:

Former *f*: to *h*, to *w*, to *p*, to *b*, to *v*, to extinction.

Latter *f*: to *h*, to *s*, to *w*, to *p*, to *b*, to *v*, to extinction.

Diversely mutant: *w-v*, Taupota, Wedau, Galavi, Boniki; *w-s*, Mukawa; *w-h*, Suau; *w—*, Dobu; *—h*, Redscar Bay.

The only changes of *n* are to *k* in Mukawa, to *l* in Kiriwina, to extinction in Mekeo. In Rubi *gaiine* I regard *ga* as a foreign composition member and *iine* as the remnant of *fifine* after extirpation of *f*, as also in Nada.

291.

The final liquid hitherto recognized in Indonesia is of wide extent in New Guinea. It occurs in these languages: Tubetube, Massim, Taupota, Wedau, Misima, Panaieti, Mugula, Suau, Awalama, Kwagila, Tavarā. It will tend toward simplicity to include therewith Kiriwina *waia* and Kabadi *veina*. The *p-b* forms discovered in Melanesia account for Roro *bei*. The *k* forms, sparsely found in Melanesia, are here represented by *goila* in five languages. The vowel change from *vai* to *vei* has already been discovered and accepted. In Nada and Murua *rai* offers a form without parallel, unless we are prepared to establish the *v-r* mutation upon this instance and a single form in Misima and Panaieti in item 109.

292.

These identifications are very satisfactory. We note two which are unusual. In Tubetube and Suau the initial labial is replaced by a light vowel sound, evidently transitional to its entire absence in Rubi and Roro. In Sinaugoro, Hula, and Keapara we lack explanation of the interjected palatal. The loss of the final vowel in Rubi is rare, but not without parallel in Melanesia.

297.

The Proto-Samoan stem nowhere exactly appears in any of these New Guinea languages save Sariha and Kiriwina. The closest approximation is stem *gila* recoverable from Keapara and Misima. Next we find a *gala* stem with its range of consonant mutation. At the last we find a *karo* stem in Kwagila. I have collated only for the consonantal elements and with no great insistence on the validity of these groups.

298.

A very good series is here exposed. The only unusual element is the preface in Awalama, Taupota, and Mukawa; and this recurs in Nggao. In the principal note I expressed doubt as to the Malay and Javanese; we come nearer to them with this New Guinea material, where *idu* and *ilu* are regular in their mutation.

300.

The prevalence of *n* in these New Guinea identifications inclines me now to the establishment of the Proto-Samoan stem *ikan*, the more particularly as this region of the great island seems to have been little visited by Indonesian rovers. The central *k* is altogether absent, except perhaps that the

extra *i* in Tubetube *iie* is some such recognition of recent loss as is carried by the ' in Samoan. Inexplicable and unrelated prefixes are found in Roro and Kabadi.

302.

The *kati* stem is easily recognizable in Kiriwina and Nada, and the change of final vowel does not interrupt the identification in Tagula. The Dobu form seems associable, yet we have in that speech no confirming instance of a *t* elided under full protection. The former element of Kubiri *gitaboni* I regard as *gati* under 1432 metathesis, and thus admissible. Murua *gedi* is a simple variant of *gadi*. The Tubetube and Suau forms are not to be explained.

In Boniki, Mukawa, Taupota, and Wedau I recognize a different root, the Proto-Samoan *ut* of the same meaning. In the two former it is modulated by the preface *k* which has already been seen in this area. In Nuclear Polynesia we find this root as follows:

Samoa: *u*, *feū*, *utia*, to bite. Futuna: *u*, *ūti*, id. Uvea: *uu*, *uusi*, id.
Tonga: *uu*, *uji*, *feuuji*, *feuntaki*, id.

The Taupota *utai* and forms associable therewith derive quite satisfactorily from this Proto-Samoan *ut*, except that Melanesia, so far, has exhibited no identifications which might bridge the great gap between Torres Straits and Nuclear Polynesia.

306.

The New Guinea identifications are truer to type than many which are found in Melanesia. The series is *kutu-gutu-utu-uku-uhu-uu-u*, and from *gutu* along an offshoot to *gu*.

308.

In this Torres Straits material we find no occurrence of the sky sense, which is the only meaning which the stem carries in Indonesia and in Polynesia. In several cases the stem designates day and its light, more commonly it is the wind, and these two meanings are found in Melanesia. Yet on the eastern coast of New Guinea, at Gorendu in Astrolabe Bay, Miklucho Maclay has recorded *lang* in the sense of sky.

309.

Lacking in the simplicity which marks many of the New Guinea identifications, we shall best account for the variety in this item by assuming that the loan has been made in several instances at second or third hand. Thus, while Dobu *nene* is remote from *lango*, the latter element in the composite *nene-wara* points to a borrowing of the *nigau-wari* of Murua; this is easily derivative from Panaieti *nagunagu*, which may readily come from the same parent as Mekeo *angu*, and that parent is an easy variant of *lango*. In one devolution series we find *lalo-lao-ao* and *angu-au*, in another *nagu-nigu-nigo-nene*. The acquisition of these forms clears up some of the difficulties noted in the principal note: Guadalcanar *ango* is abundantly established; and the Solomon Islands *lau-au* no longer requires assignment to the Post-Polynesian raiders.

312.

Not one of these forms fails of recurrence in Polynesia itself except *nim*, and the Polynesian intolerance of closed syllables precludes that. In this added material we note the following instances where the *five* word and the *hand* word diverge:

Five.	Hand.	Language.
<i>nim</i>	<i>nima</i>	Tavara, Kiviri.
<i>lima</i>	<i>nima</i>	Tagula, Nada.
<i>ima</i>	<i>gima</i>	Keapara, Hula, Sinaugoro.
<i>lima</i>	<i>ia-mila</i>	Kiriwina.

313.

In Kiriwina *ia-mila* the metathetic form, of the 3214 type, has the same prefix *ia* as in *ia-gila* in item 308 where also it is associated with a metathetic form.

316.

Mukawa and Kubiri exhibit the stem as *melu*, which reappears in Santo, Lo, and Volow. They differ slightly in their treatment of it, Mukawa con-duplicating, Kubiri preduplicating the stem. The syllable *na* may have locally a formative function, or it may represent the final *m* of the stem.

317.

The word remains almost without change in this area until we reach the *mamu* form in three languages neighboring in a single bay. The *n-m* mutation has been observed but once, in the New Georgia and Nggao forms in item 351. Tagula *ma* has lost distinctive form, yet it is reasonable to associate it with *manu* as a product of excessive degradation.

321.

There are two distinct loan series in this area. The one borrows the form *inu* and subjects it to no change greater than the suffixation of local formative elements. The metathesis in Hula is patent, 213 type. The Uni *bibinu* is clearly a preduplication of *binu*, but we have no other example of a prefix to this stem. It would undoubtedly have served Judge Fornander as a link between Polynesian and Greek. It should, however, be noted that similar preface consonants have elsewhere been noted in New Guinea despite their anomaly in Polynesian. The second loan series is based upon the stem *inum* with a consistent sacrifice of the former vowel. This series runs clear from *numa* to *nom*; then with a further frontal abrasion we have the series from *uma* to *im*, and probably Kiriwina *mum* adjusts itself therewith. Then with a preface *t* it is possible that we can trace yet another series in *tanuma*, *toman* by metathesis, *toma* and *tom*. Murua *amomu* may be related in some obscure fashion to *mum*.

324.

Excellent identifications are found in the series *mata-maka-mati-matan-mara-maha-ma*. We encounter a group based on a *mani* stem which we can not reconcile with *mata*; they are included in the list for so much value as may lie in the resemblance to *ma*.

328.

We should remove the Mekeo and Roro words from this item; they are variants of *lango* (309) and have already been discussed in their proper place. So far as we have words with the *n-m* skeleton we may feel secure in the identification. At the same time it should be noted that the vowel treatment is the less usual one in each of these New Guinea languages, but each finds confirmation in Melanesia, and the *namo* form is found in the Polynesian of Fotuna. The more complicated forms call for examination in detail. In the composites two alien elements are involved. The *iodi* of Awalama is so clearly the *eoti* of Tavara that we are assured that the *mo* of the latter is a wasted form of Awalama *himo*. As between the succeeding members of the other group, *kini* of Taupota and Wedau, and the *nika* and *niku* of Nada and Murua, there is an evident metathesis, but it is impracticable to determine from our material the direction in which it has acted. We then encounter *namu* in the series *gumu-kimu-sumo-simu-himo-imo-mo*. The *gumu* form illuminates Tangoan Santo *moke*, and *himo* the Malo *mohe*, both by metathesis.

329.

It is interesting to note in this area the close proximity of *udi* and *udu*, the latter of which is so strongly prevalent in the eastern gateway.

330.

As soon as we pass from the identical *niu* in New Guinea we encounter some very interesting series of Indonesian resemblances. Misima *nihu*, with the inner assumption of the aspirate, is identical with the Malagasy. The forms with final liquid in Mukawa, Awalama, Taupota, and Kwagila are readily comparable with forms in Indonesia subject to the same modification. The *rura* of Kubiri and Kiviri is a doubtful form, but the presence of the final liquid syllable may serve as a link to the foregoing. The Kiriwina forms seem associable with the Sulu and Ahtiago, metathesis of the 132 type affecting the two vowels.

334.

The Motu identification is so distinct (and Galoma is clearly metathetic, of the 3214 type) that it carries the *nanu* forms. Furthermore the mutation *l-n* is well established, not only in New Guinea and in Melanesia but in Polynesia as well.

335.

All these identifications are satisfactory until we encounter Mekeo *ngan-gau-nga*. I have admitted it for inspection because it has the *lau* stem vowels properly placed, but the consonant mutation (which, however, is normal in Moiki and has a certain standing in Melanesia) and the duplication lack confirmation in the speech and in the life-history of the word.

336.

After the excellent identifications in Mekeo and Tagula we shall have to grope our way through local modifiers and degradation forms. Excising the formative elements, we pick out *nono* in Mukawa, Tavara, Wedau, Awalama, and Taupota; and this is cut down to *no* in Oiun. The loss of the initial liquid (a well-supported movement in the four languages) gives *ona* in Roro, *ano* (321 metathesis) in Raqa, *oono* in Kabadi, which is yet further reduced to *oa* in Uni.

338.

In this collection Motu *dae* would scarcely find a place if it were not for the Saa *ta'e* to account for the initial *t*, and for the establishment in other items of the extinction of *k*. Wedau also has established the *k* loss, and the initial *g* may be regarded as a modified kappation of the Motu *t*. Both these forms may proceed from the stem *sake*. So, too, does Sinaugoro *rage*, for the *s-l* mutation found in 298 confirms the *r* in this instance. The Keakalo *agi* rests upon the simpler *ake* stem.

339.

The forms which exhibit the mutation of the initial aspirate to *t*, *d*, and extinction are satisfactory. Thus we have no difficulty in accepting Tau-pota, Awalama, Tavara, Roro, Motu, Uni, and Pokau. In Tavara the *e* in the *l* place may be an error in transcription and the word be identical with the Awalama form, or it may be comprehended as a phase of the mutation from the liquid to the vowel noted in item 284. The remaining forms are too remote from type to establish themselves, except that we note the presence of a series *keta-eta-ta*.

340.

A considerable group of these languages has a vocable of *sarima* type, but we have no explanation of the interjection of a syllable within any Polynesian word; we note the curious resemblance and constant difference, but may venture on no identification. Divested of extraneous matter, the other New Guinea forms rest upon the mutation series for the aspirate of *s-t-d-r*. It is interesting to note the persistency of an *n* either in the stem itself or characteristically associated therewith. This is found in Kubiri, Koko-Yimidir, Galavi, and Mukawa, and in Astrolabe Bay on the east coast in Gorendu *saman-mole*. It comes again to light in Tanna and Aneityum.

342.

To these satisfactory identifications we add from Astrolabe Bay the equally satisfactory Gorendu *sing*, the sun, a form by no means uncommon in Melanesia.

344.

The mutation proceeds regularly from *s* to *t*, to *n*, to *g*. Vowel variety appears but twice, in Nada and Oiun, and is associable with the only Melanesian instance of vowel change, Norbarbar *visis*.

349.

The fact that Motu *talo* is of the present Polynesian type and that the other New Guinea identifications are of the Efaté type is proof that during the traverse of Torres Straits both forms were in the possession of the migration.

350.

There is little difficulty in these identifications. Kiriwina *taigila* is so clearly metathetic that the intrusive *i* need give us no concern. We have next a series in which the *l-n* mutation dominates. Next comes the loss of *l* in *taina*, *tain*, *teina*, *teini*, *kaina*. Then follows the loss of the vowel

in the second syllable. The extirpation of an inner syllable in these languages is rare, but in this case it is incontestable; this gives us the tertiary series *tena*, *tega*, *tina*, *tenan*. Simultaneous loss of *l* and *ng* gives a secondary series of *taia*, *taiya*, *kaia*, *haia-na*. Mekeo *aina* shows loss of *t* and *l*, but retains a trace of *ng*.

351.

Forms associable with the stem **kanus** hitherto postulated are *kanu*, *kan*, *kanudi*, *kanuna*, *kanuta*, *kanunu*, *kaninu*, *kanuru*, *kinura*, *kunruvi*. The series of the **anus** type runs *aninu*, *anumai*, *anodi*, *aniulu*, *atiulu*, *ainuku*. It may be that the final *s* of the two stems appears in *kanudi*, *kanuta*, *anodi*; but it is unsafe to attempt to trace it beyond these well-established mutations.

360.

A critical point is the position of the stem *f*. From it we obtain two series: the more direct is *vua*, *pua*, *bua*, *gua*, *hua*; the other, affected by metathesis quasi *ufa*, is *uwa*, *uwe*, *ova*, *owu*, *awu*; this accounts for the Kabadi and Rubi forms. It is a matter of no great moment, save in the establishment of radiant foci for this loan material, that while *ua* might devolve from the other series it follows more normally in the languages where it is found as a reduction form of *uwa*.

361.

Of the three stems conjoined in these data, New Guinea lacks the Polynesian *puaka*. Therefore I have omitted the phonetic collation of the material. The data are so ordered, however, that it will be easy to follow the ramifications of the stems *poro* and *po* in this region. Nowhere in this mass of material does any middle term appear by which we may certify ourselves that *poro* and *po* are homogenetic.

What, now, is the position of these three dozen languages of New Guinea from which we have extracted material, some more and some less satisfactory? In 1892, and again in 1894, Dr. Sidney Herbert Ray declared them Melanesian. In 1907, in the linguistic volume of the Cambridge reports, he continues this designation with renewed argument in its behalf. In 1910 Dr. Seligmann, working upon this material and a valuable supplement of his later collection, follows this leadership and designates the people of the eastern Gulf of Papua and the continuing coast and islands well along into the Louisiade Archipelago as Melanesian. At the point of demarcation in the Gulf of Papua, approximately at Cape Possession, set down by these students, there is a difference in the people; more than the language shows it. They have decided that the difference is one between Papuans and Melanesians.

In this inquiry we shall devote no attention to the differences of physical appearance, to the diversity of custom of life; we are limited to the evidence which may be found to lie in language.

What, then, is a Melanesian? In Dr. Ray's studies the men eastward of Cape Possession who differ from the men living westward of that boundary point are the Melanesians of New Guinea. We are then to discover whence he derives his knowledge of the Melanesians. It is from Dr. Codrington that he has drawn—from the same work which we have been so glad to use in this work, albeit to a far different conclusion.

Assuming for the present, and only for the present, a standard Melanesian, we must consider how that element could be communicated to the New Guinea coast. Either the inhabitants of the Gulf of Papua voyaged to some place of Melanesian culture, remained sufficiently long to acquire the Melanesian element they are considered now to possess, and voyaged home again; or else the Melanesians put to sea from their own lands, colonized the New Guinea coast, and survive in these settlements discrete from the Papuan autochthons. Either movement predicates navigation. The Melanesians are notoriously not a seagoing race; with very few exceptions their art of canoe building has advanced no greater distance than is required for the construction of light dugouts in which the single paddler scarcely dares follow the fish outside the still lagoon water within his reef.

The seamanship of the coastal peoples of New Guinea is of no better order; when the most adventurous of all this race sets forth upon its annual sago voyage, the putting to sea remains so unusual to their custom on the water that it is surrounded with all the formality of religious rites. It is not like the free adventure of the hardy seaman who hoists sail on the canoe in which he has confidence, trims the sheet to force the wind to work for him, and gaily sails to a distant port, all in the day's work. The voyage of the New Guinea traders of pots for sago is no more than across the head of the gulf, from Motu to Elema, yet it can be accomplished only with the favor of fair winds; the return voyage can not be made until the wind changes in the seasonal break of the monsoon. Even the name of the vessel which has specially to be compacted for this voyage shows that its navigation is a foreign art, for *lakatoi* is a survival from something borrowed; it is a mutant of *vaka-tolu*, which we have no difficulty in interpreting as "three boats," and that is true to the naval architecture, for the Motu man fears the sea so cordially that he will not allow even his zeal for trading to trust himself to the waves in anything less stable than three boats lashed together. Whether the fleets of Motu went to northern Melanesia or Melanesia came to the Gulf of Papua, we are confronted by the need of canoe-craft and seamanship which has utterly vanished. Neither voyage could be repeated in these days; the people at each end have not the boats nor the ability to sail them; they fear the sea.

On either side these folk who fear the sea we have the clear record of a race who made the sea their own, even to its empty limit, who have adventured such voyages to distant lands and a safe return as proved beyond the power of our own race until four centuries ago.

Dr. Ray rests his Melanesian identification upon the Melanesian of Dr. Codrington's study. In this volume we have worked intimately over that Melanesian possession. We have found no language which we might establish as the standard Melanesian, no *Ursprache* from which the jangling multiplicity of languages might be shown to derive. There is none such; there is no standard Melanesian. In these data we have examined the element common to the languages from Moánu to the southern tip of New Caledonia. We have found this element everywhere reducible to its parentage; we have found it Polynesian material borrowed by ruder people.

The same identification holds when we examine the data collected in Torres Straits. It is Polynesian material. It would have been possible

for voyagers from the Gulf of Papua to some Melanesian island, for colonists coming out of Melanesia, to bring this Polynesian content of the Melanesian speech. But the language record militates against this. As between different languages on the New Guinea coast we have found differences which indicate secondary borrowing, but these readily reduce to well-marked foci on the same coast; as to the material segregated at these foci, their character is clear: they are primary loans of the Polynesian.

On the strength of such material as was then available from the Motu, I had no hesitation in adopting that language as establishing a proof point of the swarm of Polynesian migration through Torres Straits, the first point fixing the course to which, from its ultimate destination, I have assigned the designation of the Viti Stream. This newly accessible material but confirms the former conclusion; instead of a single early station on that course we now have a number and all confirmatory.

The Torres Straits stations, with two exceptions, are all along the coast. The two exceptions are Mabuiag and Miriam, which Dr. Ray assigns respectively to the provinces of Australian and Papuan speech. Although the vocabularies are the largest in our possession from the region, the material which they have contributed to these studies is the least; six vocables from Mabuiag and three from Miriam are all that may be associated with the Proto-Samoan. On the map these islands seem to lie in the fairway for any voyage through the straits; it would seem that there the Polynesian influence should be at its maximum. But in the conditions of Proto-Samoan sailing these islands were remote. The Polynesians were sailors, but they were not bigoted in their navigation. Hardy to risk the unknown expanses of open sea when the sky lay empty before them, they preferred the greater certainty of a coast to follow; any shore, even when it lay alee, served to deflect their course. This is a part of their seamanship which we have already had to consider when examining the courses through the Solomons and the New Hebrides. It is this facility of coastwise voyaging which has established for us so many points of Polynesian influence along the New Guinea shore from the great gulf to the remote eastern islands.

In conclusion we judge that these languages of New Guinea that have been called Melanesian are susceptible of correlation with languages situated geographically in Melanesia; that such correlation rests almost wholly on the vocables here examined; that this element common to Torres Straits and Melanesia is common to Melanesia and to Polynesia. Therefore the result of the investigation is not the establishment of a distinctively Melanesian content in the languages limited by Motu and Nada, but the association of that content through the Melanesian with the earliest type of the Polynesian. As the result of this added study we now find the southern gateway out of Indonesia most satisfactorily established.

APPENDIX III.

BIBLIOGRAPHY.

I have been permitted to publish in the Bulletin of the American Geographical Society (vol. xli, pages 305-343) a far more extended list of the works which have contributed to the foregoing studies. Since that publication is readily accessible I have restricted this bibliography to the purely linguistic works upon which I have drawn for this material. A few of general applicability are grouped as General, the remainder will be found under the name of the language upon which they bear, with such repetitions of authorities cited as will be found to facilitate reference.—W. C.

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THE DOTS INDICATE THE AREA OF ORIGIN
 AND THE LINES INDICATE THE TRACKS



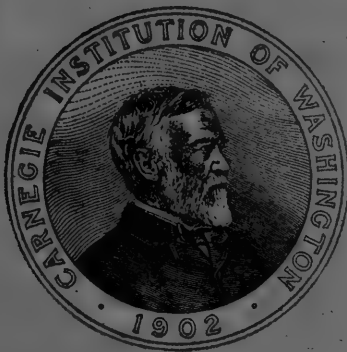
The Polynesian Wanderings

Tracks of the Migration Deduced from an Examination
of the Proto-Samoan Content of Efaté and
other Languages of Melanesia

BY

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